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Forty-First Annual Report

of the

State Board of Health
of South Carolina

For the Fiscal Year 1920 to the
Legislature of South Carolina



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COLUMBIA, S. C.
GONZALES AND BRYAN, STATE PRINTERS,
1921

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57

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LETTER OF TRANSMITTAL

Medical College of the State of South Carolina, Medicine and
Pharmacy, Charleston, S. C. Office of Dean.

January 29, 1921.

Hon. R. A. Cooper, Governor of South Carolina, Columbia, S. C.

Dear Sir: I have the honor to submit for your consideration the annual report for 1920 of the Executive Committee of the State Board of Health.

Your attention is directed especially to the report of the State Health officer in which you will find briefly summarized the reports of the different departments whose activities are under the supervision of the State Board of Health. While the splendid work done by those who are laboring in behalf of the public health is highly gratifying, we must nevertheless realize that we are far from reaching our desired goal, and that only by an unrelenting offensive can we hope to hold the ground we have gained and to make further advances.

The loss of life from preventable causes is all too high. Last year 250 women died needlessly in performing their physiological duty of becoming mothers, and unnecessary dangers surround the lives of infants during their first year as indicated by the high mortality during this period. The Bureau of Child Hygiene is rendering efficient service in this special field which has for its object the conservation of life for the next generation and the results which have so far been achieved merit the fullest measure of support.

There can be no more serious undertaking than the effort to control the venereal diseases. These devitalizing and destructive maladies are far more difficult to handle than most other infections for reasons that are sufficiently obvious. But the widespread morbidity and the high mortality resulting from them which make such serious inroads into the vitality of our citizenship, render it imperative that we attempt by every means within our power to check their subtle and insidious operations. Gratifying results have been obtained by the venereal clinics and we earnestly trust that nothing will be done to prevent the continuance and the expansion of this great work. The economic value

of public health work is illustrated by the report of Dr. L. M. Fisher of the U. S. Public Health Service in the field of malaria prevention. Dr. Fisher estimates that in 1919 the three towns of Bamberg, Chester and Hartsville combined, suffered an economic loss of approximately \$72,464, and that during the past year a saving in excess of \$60,000 was effected by prevention work.

The report of the Hotel Inspector indicates that the sanitary condition of the hotels of the State are already showing improvement "The hotels are beginning to comply with the law generally, and we can see improvement in sanitary conditions in a great many of them."

The Bureau of Rural Sanitation, the Tuberculosis Sanatorium including the Palmetto Sanatorium for negroes, the Laboratory, and the Department of Sanitary Engineering are continuing to render most important service in the control of disease and the conservation of public health. Their reports are commended to your careful consideration.

Respectfully,

ROBERT WILSON, JR., M. D.,
Chairman.

GENERAL REPORT

This is the forty-first annual report of the Executive Committee of the State Board of Health, and is for the year ending December 31, 1920.

This report is made in compliance with the Concurrent Resolution, which directs that every officer of the departments of the State Government required by law to make a report to the General Assembly shall contain only concise statements of recommendations and of the transactions of the officer of the department; and that no copy of any report, or document, or law, or proposed measure shall be made and printed at the expense of the State except what shall be absolutely necessary for the information of the General Assembly.

EXECUTIVE COMMITTEE STATE BOARD OF HEALTH.

Robert Wilson, Jr., M. D., Chairman.....	Charleston
R. A. Marsh, M. D.....	Edgefield
C. C. Gambrell, M. D.....	Abbeville
E. A. Hines, M. D.....	Seneca
W. J. Burdell, M. D. (Resigned in September).....	Lugoff
M. J. Walker, M. D. (Vice Dr. W. J. Burdell, resigned)....	York
William Egleston, M. D.....	Hartsville
W. M. Lester, M. D.....	Columbia
W. W. Dodson, Phg. D. (Served through October)....	Columbia
R. K. Otis, Phg. D. died December 9, 1920 (vice Dr. Dodson, retired October, 1920)	Columbia
Samuel M. Wolfe, Attorney-General.....	Columbia
W. V. Sutherland, Comptroller General.....	Columbia
James A. Hayne, M. D.....	
Secretary and State Health Officer, Columbia	

STAFF OF SOUTH CAROLINA DEPARTMENT OF HEALTH.

James A. Hayne, M. D., Executive Officer of State Board of Health.

C. V. Akin, Assistant State Health Officer.

E. L. Filby, State Sanitary Engineer.

L. M. Fisher, Assistant Sanitary Engineer, U. S. P. H. S.

J. H. Woodward, Hotel Inspector.

E. W. Grieshaber, Clerk of the Board.

W. M. Riser, Secretary to Dr. Hayne.

John Roundtree, Janitor.

PERSONNEL.

BUREAU OF RURAL SANITATION AND COUNTY HEALTH WORK.

Administration Department.—L. A. Riser, M. D., in charge. Miss Mary C. Dibble, Secretary; Dudley A. Burrows, Moving Picture Operator; Mrs. M. T. Simpson, Microscopist.

Orangeburg County Department.—D. D. Bullock, M. D., Health Officer, (*) Miss Elizabeth Simpson, Nurse; Frank E. Swope, Marvin Smoak and F. W. Dibble, Inspectors; Miss L. B. Hughes, Clerk.

Darlington County Department.—C. H. Verner, M. D., Health Officer; Miss Julia West, Clerk; Miss Marion Cope, Nurse; A. R. Nicholson and W. W. Nicholson, Inspectors; Hattie Cannon, Social Worker.

Lee County Department.—E. Paul Knotts, M. D., Health Officer; Miss Ann Murphy, Social Worker; B. S. Beasley, Inspector; Mattie Fisher, Nurse.

Calhoun County Department.—C. S. Kinzer, M. D., Health Officer; Mrs. C. S. Kinzer, Nurse; W. P. Prickett, Inspector.

Fairfield County Department.—R. G. Hamilton, M. D., Health Officer; Miss Louise Powell, Clerk; Miss Carol Clements, Nurse; L. W. Taylor, R. D. Beckham and R. C. Roof, Inspectors; Ella Edwards, Nurse.

Charleston County Department.—Leon Banov, M. D., Health Officer; Miss May Mood, Clerk; Mrs. Mary E. O'Connor, Nurse; J. B. Bailey and S. S. Welch, Inspectors.

Newberry County Department—Roy P. Finney, M. D., Health Officer; Miss Theresa Lightsey, Nurse; Miss Julia Johnstone, Clerk; J. Wise and O. Derrick, Inspectors.

Cherokee County Department—Walter Boone, M. D., Health Officer; Mrs. Terissa Wilson, Nurse; G. G. Scruggs, J. R. Jeffries, Inspectors.

(*)Dr. R. S. Bailey resigned as Health Officer of Orangeburg County, November 30, 1920.

LABORATORY DEPARTMENT.

F. A. Coward, M. D., in Charge.
 James R. Cain, Bacteriologist.
 H. M. Smith, M. D., Assistant Bacteriologist.
 M. C. Davis, Stenographer.
 F. L. Parker, M. D., Chemist and Bacteriologist, Charleston.

BUREAU OF VITAL STATISTICS.

C. W. Miller, Chief Clerk.	H. Coles, Index Clerk.
M. Lindsay, Filing Clerk.	M. Currell, Stenographer.

SOUTH CAROLINA SANATORIUM.

Ernest Cooper, M. D., Superintendent.
 _____, Assistant Physician. (Position to be Filled.)
 Mrs. Estelle Cooper, Matron A. I. Rembert, Field Secretary.
 Carrie Spivey, R. N. Pupil Nurses.
 Pearl Leitzsey, R. N. Servants.

DIVISION OF VENEREAL DISEASE CONTROL.

C. V. Akin, M. D., P. A. Surgeon, U. S. Public Health Service, in charge.
 G. E. Neal, M. D., Field Supervisor of Clinics.
 F. O. Winter, Clerk and Stenographer.
 James H. Fowles, Attorney.

Anderson Clinic: T. P. Brown, M. D.; C. Turner, Nurse; T. R. Brandon, Attendant.

Charleston Clinic: E. C. Baynard, M. D., Supervising Consultant; R. B. Gantt, J. Z. Ravenel, Clinic Physicians; G. R. Williams, Attendant.

Columbia Clinic: N. B. Edgerton, M. D.; S. E. Wheeler, M. D.; L. Blackburn, Nurse; L. Lester, Nurse; H. R. Claytor, Attendant; P. Anderson, Hired Help.

Florence Clinic: J. D. Eaddy, M. D.; E. Morgan, Nurse.

Greenville Clinic: B. L. Chipley, M. D.; J. E. Daniel, M. D.; F. A. Luben, Nurse; F. A. Luben (Mrs.), Nurse.

Newberry Clinic: J. B. Setzler, M. D.; N. I. McCarley, Nurse.

Orangeburg Clinic: H. T. Schiffley, M. D.; H. S. Haynes, Attendant.

Spartanburg Clinic: C. L. Booth, M. D.; O. W. Wilson, M. D.; M. I. Grant, Nurse.

Union Clinic: S. G. Sarratt, M. D.; L. A. Shaver, Nurse; R. Jeter, Attendant; S. White, Hired Help.

BUREAU OF CHILD HYGIENE.

Mrs. Ruth A. Dodd, R. N., in charge.

Miss Malinda Murphy, Assistant Supervising Nurse.

Miss Helen Fenton, District Supervisor.

Miss Jean Carpenstein, District Supervisor.

Miss Annie C. Aiken, Secretary to Mrs. Dodd.

Ellen Woods Carter, Field Nurse.

THE BOARD'S QUARTERS.

The Executive Department of the State Board of Health and the Department of Venereal Disease Control, occupy rooms on the fifth floor of the Palmetto Building.

The Bureau of Child Hygiene and the Field Secretary of the S. C. Sanatorium occupy an office on the fourth floor of the Palmetto Building.

The Department of County Health Work is on the ninth floor of the Palmetto Building.

The Laboratory remains in well arranged rooms furnished by the University of South Carolina, in LeConte College.

The Bureau of Vital Statistics is at the University of South Carolina in LeConte College.

The South Carolina Sanatorium for the treatment of Tuberculosis at State Park, eight miles from Columbia.

MISCELLANEOUS.

The reports of the several departments of the State Board of Health for 1920, which are published elsewhere in this volume, show that South Carolina stands well to the front in taking care of the health of her citizens. The liberal appropriations given to the State Board of Health by the General Assembly of 1920 was a vote of confidence. From the meager appropriations of 1910 to the present year, your State Board of Health has endeavored to progress along rational lines, adopting only those methods of health preservation which have borne the test of actual service in other States. We feel this year that the reaction from the high standards set during the period of the war, when altruism was the watchword and when each one endeavored to feel that he was a part of a great State and a great country, must be combatted; that he must not allow the great undertakings that were commenced under this appreciation of one's duty towards one's neighbor to lapse. It is true that the financial state of South Carolina, due to the lowered price of farm products, especially cotton and tobacco, is deplorable, but realizing this, we must safeguard the health of our people so that they can work more and be able to enjoy the fruits of their labor.

The Bureau of Child Hygiene, created two years ago, is carrying out probably the most important work of any of the departments, for we believe that the conservation of the babies and the children of South Carolina is the most necessary function of the State Board of Health. Unfortunately, our reports show that the deaths from parturition and pregnancy in 1920 were 414—out of all proportion to the comparative death rates from those causes in other countries, and even elsewhere in the United States. At least 250 women died unnecessarily, owing to various causes which we as a State must correct. The first of these causes is the

ignorance of those having charge of the mother during this period when she should have the best that the State can afford, and second, that because of the same ignorance the babies died during the first six weeks of their lives. We are endeavoring to combat this terrible mortality through the Bureau of Child Hygiene by training midwives so that they will not be too ignorant to properly care for the mothers who are in their charge. The report of the Bureau of Child Hygiene shows that this work is being carried out by the registering of one thousand midwives in this State during the past year. These midwives before being registered were given some instructions as to what to do and what not to do in taking care of mothers. There were 523 visits to mothers before their children were born, and 1,095 visits to the babies during the first six weeks of their life. There are at present fifteen counties that have made definite appropriations for the employment of nurses, and a nursing service has been extended into twenty-six counties, and forty-four nurses were employed. Twenty-five of these nurses have been financed by the Red Cross.

We feel that a perusal of the report of Mrs. Dodd, who has so energetically, enthusiastically and intelligently carried on the work of this department, will repay the reader, and we hope the Legislature will carefully weigh the arguments in her report and make the appropriation asked for. We feel sure that no money expended by the State can be spent to better advantage than in taking care of the prospective mothers and babies and children of South Carolina.

The same committee serves as Advisory Council for the Bureau of Child Hygiene as served before, namely: Drs. E. A. Hines, Seneca; D. L. Smith, Spartanburg; L. LaBruce Ward, Columbia; W. W. Weston, Columbia; Ashley Mood, Sumter; R. M. Pollitzer, Charleston. They are the foremost pediatricists of South Carolina, and have been selected before we felt that as pediatricists they would be able to give us advice and counsel, and that this department should be carried out on scientific medical lines.

Venereal Disease control work has been carried on under the guidance of Dr. C. V. Akin and at present the work is being done in nine county seats, viz.: Greenville, Anderson, Spartanburg, Union, Newberry, Richland, Florence, Orangeburg and Charleston. The Bureau of Venereal Disease Control has actually treated 21,485 cases of these diseases. 18,884 doses of salvarsan have been administered. Nearly 3,000 cases of syphilis have been dis-

charged as cured. What this will mean to the coming generations of South Carolina is hard to appreciate. When we reflect that 25 per cent. of all cases of tuberculosis show a positive test for syphilis, that at least 40 per cent. of our cases of insanity are due to syphilis, or some other disease grafted upon syphilis, that nearly all cases of paralysis which we see are syphilitic in origin, that most of the cases of heart disease, kidney disease, diseases of the arteries, are from same disease, and that the tremendous mortality of children under six weeks of age is also due to syphilis, we can visualize what it means to have cured 3,000 people within the State. We hope the Legislature will carefully read Dr. Akin's report contained in this volume and continue its liberal support in the future as it has done in the past.

The control of venereal diseases is a problem of the twentieth century. All the civilized nations of the world are now engaged in its solution. We know that the reason for the tremendous prevalence of these diseases is that they have been cloaked in obscurity, and that the treatment of them has been largely in the hands of those unscrupulous persons who have exploited its victims. Now that the clear light of education is being thrown into these dark places, we feel that the truth will be known to the people and that they will see to it that laws are enforced that prevent these diseases, and that those who are its unfortunate victims shall receive medical attention, not only because we feel sorry for them and wish to cure them, but because they are a menace to our civilization as long as they remain uncured.

Closely related to the venereal disease work and functioning with it is the State Hygienic Laboratory. This laboratory was established in 1908, being one of the oldest hygienic laboratories in the United States. It has done an immense amount of work during the past year. The report of Dr. F. A. Coward, in charge of the laboratory, shows that there have been over 16,000 Wassermann tests for syphilis made during the last year, that there have been a grand total of 30,000 tests of all descriptions made in the laboratory, and that over 600 people received preventive treatment for rabies. Allowing the small sum of \$1.00, which is less than any laboratory would charge for an examination, we would have \$30,000, and allowing \$25 for each treatment of rabies, a total of \$15,000 for Pasteur treatment, making a grand total of \$45,000.00. The laboratory has cost the State \$11,000. There is

therefore a saving of \$34,000 to the taxpayer. We feel sure that a liberal appropriation will be made for the continuance of this laboratory, for without a diagnostic laboratory it is impossible for a State Department of health to properly functionate. The laboratory is the eye of the physician. The report of the Hygienic Laboratory is appended to this report.

The Vital Statistics Department still continues under the efficient administration of Mr. C. W. Miller, who has been with it since its establishment. It is admittedly one of the best of the departments of vital statistics in the United States, and it is also run for less money than any other vital statistics department in the United States. Other States send here to find out how we can possibly conduct this department as efficiently as it is conducted and yet have so small an appropriation for its maintenance. The report of Mr. Miller is appended.

Our State Sanitary Engineer is giving us excellent service and his report is appended. He is at present engaged particularly in seeing to it that the water supply of the cities is safeguarded, and also in doing other work relating to sanitary engineering. His report is an interesting one and should be given careful scrutiny.

A new departure for the State Board of Health this year was the inspection of all the hotels of the State. This has been carefully done twice, and all hotels and restaurants have been scored. We feel that this has been a step in the right direction, and the traveling public appreciate the efforts made in their behalf. Over 2,000 inspections have been made in various parts of the State and the hotels are beginning to comply cheerfully with the regulations made in the Acts of the last General Assembly.

The department of Rural Sanitation has made a most excellent showing for the past year. It has worked in eight counties, viz.: Orangeburg, Darlington, Lee, Calhoun, Charleston, Fairfield, Newberry and Cherokee. Dr. Riser's excellent report is appended. We have secured a desirable personnel for this department of enthusiastic, energetic young men who stand high professionally. We feel that the work for 1921 will be even better than that for 1920. The work for 1920, the first year after the war, shows that constructive work, namely: the building of sanitary closets and screening homes, has reached large proportions. The educational work shows that there were 28,757 homes visited, and that lectures were given with a total attendance of 57,000. They also have done good work in school inspection, having inspected

11,819 school children. Upon this department devolves the work of the control of communicable diseases in the counties where they are active, and they have done their work well. Small-pox is epidemic in the State, and it has been held in check completely in those counties that have county health departments. We urge the Legislature to see to it that any county that wishes to put up the necessary money for rural sanitation shall have the backing of the State by its contribution of money to aid the county in this work. Dr. Riser's report is appended and its perusal will be of benefit to its readers.

EXECUTIVE DEPARTMENT.

The Executive Department, which has entire charge of all activities of the State Board of Health, has been kept exceedingly busy this year for many new activities have been undertaken by the department. And owing to the fact that a much more liberal appropriation was made than usual, the proper expenditure of large sums of money was directly under the control of this department. We have an efficient bookkeeper and a most competent secretary to the State Health Officer. This department keeps in contact with the health officers of the various counties and sees to it that they are supplied with proper bulletins, with typhoid bacterin, with diphtheria antitoxin, and with vaccine virus, and also assists them in carrying out the laws of the State in regard to quarantine. Mr. Filby, the State Sanitary Engineer, is connected with this department and is sent from place to place in the State wherever his special services as a sanitary engineer are necessary. The State Health Officer visits such parts of the State and such cities and towns as desire his advice regarding the enforcement of quarantine or other problems. The offices of the Executive Department are always open and it is there that requests for advice or complaints are received; and it is the endeavor of the Health Officer to have all complaints investigated and to give advice on all subjects pertaining to public health. To do this properly he must keep abreast of medical progress and he attends the various medical and professional societies engaged in public health work and in the solving of public health problems.

The Department of Agriculture carries out the rules and regulations of the State Board of Health in regard to foods and drugs. The only new regulation adopted this year was that in regard to the sale of condensed, evaporated or powdered skimmed

milk. It was felt necessary to make such a regulation as it had come to the knowledge of the health department that injury was being done to the babies of the State by feeding them condensed or evaporated skimmed milk. The following regulation was adopted by the Board:

"The sale of condensed, powdered or evaporated skimmed milk is allowed, but it shall be unlawful to sell the said condensed, powdered or evaporated skimmed milk except under the following regulations: in addition to compliance with all existing laws, the said condensed, powdered or evaporated skimmed milk to be sold in packages or containers containing not less than one gallon (10 lbs.), which packages or containers shall be hermetically sealed at the time of sale; also, that at the stores, groceries, shops, or places where such condensed, powdered or evaporated skimmed milk is sold a sign shall be printed or painted in black letters on white background, and on which the letters are at least five inches high and worded as follows, must be displayed: 'Condensed, powdered or evaporated skimmed milk should not be fed to babies, children or invalids—it is lacking in food value.'"

REPORT ON EPIDEMIC AND CONTAGIOUS DISEASES
OCCURRING IN SOUTH CAROLINA DURING 1920,
BY JAMES A. HAYNE, CHAIRMAN
OF COMMITTEE.

SMALLPOX.

We regret to report that smallpox is very much on the increase in South Carolina at the present time. During the past year we have had 1,015 cases reported as compared with 304 cases reported in 1919. These 1,015 do not represent all the cases which have occurred, but only those which have been reported. We have made a vigorous effort to see that vaccination, which is the sole preventive of this disease, be carried out as much as possible. We have distributed during the year \$10,534.25 of smallpox vaccine, which is against \$2,618.35 the previous year. The State law which requires all school children to be vaccinated has been disregarded in a great many counties of the State and there is a fruitful field now open for the spread of smallpox. Many children have gone through schools and colleges without vaccination and may develop the disease at any time. It is at present a mild

form in this State, but it may develop into a severe form. In Mississippi 23 deaths recently resulted from smallpox. No deaths from smallpox in this State have been reported to this office in 1920.

By quarters the following amount of smallpox vaccine virus was distributed:

	1919.	1920.
First quarter	\$ 740 56	\$1,593 62
Second quarter	406 12	1,205 63
Third quarter	1,016 67	2,600 00
Fourth quarter	455 00	5,135 00
Total	\$2,618 35	\$10,534 25

SCARLET FEVER.

Scarlet fever has been prevalent in the State in 1920. There were six deaths from the disease and 127 cases reported. This evidently does not represent the number of cases that actually existed for that would be a very high death rate. Deaths from scarlet fever are not usually put down as scarlet fever, but as acute nephritis, which is a dangerous complication from this disease. A very large number of acute and chronic cases of nephritis in children are caused by unsuspected cases of scarlet fever which have been mild and have not attracted much attention. the patients probably not having consulted a physician, and yet this disease produces this dangerous condition of the kidneys. The following rules should be carried out in the face of an epidemic:

1. Daily examination of exposed children and of possibly exposed persons for a week after last exposure.
2. Schools should not be closed where daily observation of the children by a doctor or nurse is available.
3. Education as to special danger of exposing young children to those exhibiting acute catarrhal symptoms of any kind.
4. Pasteurization of milk supply.

DIPHTHERIA.

Diphtheria showed a larger number of cases this year than last year. The number of cases totaled 2,158, and the deaths reported for the first ten months were 97, which gives one of the lowest death rates in the Union of 6.8. We were able to judge from the findings of the Census Bureau that South Carolina stood

fifth from the top in the small number of deaths which occurred from diphtheria. This is entirely due to the free distribution of diphtheria antitoxin, and many States are adopting South Carolina's methods of the distribution of this live-saving serum which has been distributed free in South Carolina since 1909, and has saved thousands of babies. There is no money that the Legislature expends which reaches the heart of the people like the free distribution of diphtheria antitoxin, which saves infants strangling to death from this dread disease.

DIPHTHERIA TABLE NO. 1.

TABLE SHOWING THE NUMBER OF CASES DIAGNOSED AS DIPHTHERIA AND RECEIVING ANTITOXIN.

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Abbeville	...	5	...	1	...	2	1	2	4	12	10	2	37
Aiken	10	4	...	...	...	3	1	4	4	6	3	16	37
Anderson	12	1	2	14	8	8	1	6	6	25	17	...	116
Allendale	...	...	3	...	...	1	...	...	1	6	3	1	15
Bamberg	...	1	...	...	1	1	...	...	3	...	1	...	9
Barnwell	2	...	...	...	...	...	...	...	1	...	2	...	7
Beaufort	...	4	...	...	...	...	...	...	1	...	...	...	6
Berkeley	...	...	...	...	...	...	1	...	4	1	...	...	11
Calhoun	...	...	...	...	...	...	1	...	1	6	3	...	11
Charleston	24	7	...	1	7	10	...	6	3	17	13	17	105
Cherokee	3	...	6	3	3	2	...	...	8	5	...	...	30
Chester	...	1	...	...	...	...	...	22	25	12	...	...	60
Chesterfield	7	2	1	...	...	3	5	7	1	6	3	13	48
Clarendon	...	...	...	1	...	...	...	...	1	8	...	...	9
Colleton	8	...	...	...	...	4	...	...	...	5	5	...	22
Darlington	...	...	...	...	...	7	...	...	5	9	...	...	21
Dillon	3	1	...	...	...	1	...	...	16	18	15	2	64
Dorchester	1	...	...	...	1	...	...	2	...	5	...	...	13
Edgefield	...	...	...	...	...	2	...	4	...	...	1	...	13
Fairfield	...	...	...	...	...	1	...	...	17	...	...	...	19
Florence	...	...	2	...	...	4	...	...	4	12	19	5	46
Georgetown	1	...	2	1	1	...	...	...	1	1	...	...	7
Greenville	3	...	...	...	...	4	...	11	26	50	16	22	132
Greenwood	3	...	2	...	...	3	5	...	8	22	17	2	62
Hampton	...	...	1	...	1	1	1	2	...	3	1	...	10
Horry	...	...	...	...	...	...	...	1	4	...	6	1	12
Jasper	...	...	...	...	...	...	...	...	...	...	...	...	...
Kershaw	12	...	1	...	4	...	...	...	...	9	14	4	44
Lancaster	...	...	...	...	...	...	...	...	...	...	...	...	...
Laurens	...	...	3	6	4	...	...	...	3	...	8	2	26
Lee	...	2	...	...	...	...	...	...	1	2	...	...	10
Lexington	20	...	...	...	2	6	16	13	70	70	14	18	229
McCormick	...	...	...	...	...	...	...	...	1	1	...	...	1
Marion	...	3	6	...	4	2	...	1	12	4	6	...	38
Marlboro	3	1	1	...	...	...	...	...	12	6	7	...	30
Newberry	2	...	...	1	4	2	4	2	24	21	14	9	83
Oconee	4	2	...	...	...	1	...	1	8	16	11	...	43
Orangeburg	6	...	...	...	...	2	4	5	22	15	10	16	80
Pickens	4	...	...	...	...	4	1	...	3	2	4	...	18
Richland	33	10	12	3	2	5	...	...	29	23	24	23	169
Saluda	4	4	4	...	3	...	1	...	18	3	9	4	50
Spartanburg	16	6	9	6	3	6	7	9	51	65	27	10	215
Sumter	6	1	6	4	...	2	4	3	9	5	14	...	64
Union	1	2	7	7	2	1	1	...	7	5	5	13	51
Williamsburg	...	...	...	...	...	...	...	...	...	13	6	4	23
York	10	4	...	4	2	2	1	5	21	5	16	13	83
	203	59	75	50	44	93	58	89	417	516	345	208	2,158

The amount of diphtheria antitoxin consumed as compared with 1919 is as follows:

DIPHTHERIA TABLE NO. 2.

	1919				1920			
	1,000 Units.	3,000 Units.	5,000 Units.	10,000 Units.	1,000 Units.	3,000 Units.	5,000 Units.	10,000 Units.
January	36	7	74	77	113	1	204	234
February	38	9	69	49	31	3	47	73
March	69	2	77	82	68	3	121	136
April	70	10	77	43	25	2	39	73
May	45	3	43	59	39	..	33	71
June	5	4	29	11	153	4	267	237
July	45	5	88	63	63	..	68	101
August	254	18	336	232	190	..	227	262
September	315	2	473	333	178	..	255	330
October	357	26	636	597	306	..	433	735
November	238	17	327	397	188	..	261	505
December	152	4	327	348	131	..	170	274
	1,624	107	2,466	2,291	1,485	13	2,485	5,346
								25

The expenditures for diphtheria antitoxin as compared with 1919 are as follows:

DIPHTHERIA TABLE NO. 3.

1919		1920	
Month.	Cost.	Month.	Cost.
January	\$ 485.55	January	\$ 1,400.15
February	373.40	February	401.05
March	521.70	March	824.15
April	388.00	April	378.25
May	347.25	May	361.95
June	115.25	June	1,579.65
July	466.50	July	366.20
August	1,792.70	August	1,031.55
September	2,489.25	September	1,223.35
October	3,905.10	October	2,545.75
November	2,380.90	November	1,721.75
December	1,927.85	December	1,345.80
Total	\$15,193.45	Total	\$13,199.60

The National Vaccine and Antitoxin Institute of Washington supplied the diphtheria antitoxin used until July 1, 1920; after that time it was supplied by the Gilliland Laboratories of Marietta, Pa.

DIPHTHERIA ANTITOXIN DISTRIBUTORS.

ABBEVILLE COUNTY.

Abbeville	McMurray Drug Co.
Donalds	Johnson Drug Co.
Due West	Todd Drug Co.

AIKEN COUNTY.

Aiken	W. J. Platt & Co.
Graniteville	E. E. Platt, W. C. R. Turnbull
Lake View	Smith's Drug Store
Langley	Langley Drug Co.
North Augusta	W. E. Mealing, M. D.
Salley	Jones Pharmacy
Wagener	Abel & Jordan

ANDERSON COUNTY.

Anderson	Owl Drug Co., Evans Pharmacy
Belton	Horton's Pharmacy
Honea Path	Bolt Drug Co.
Iva	Iva Drug Co.
Pelzer	W. W. Griffin
Pendleton	E. G. Evans & Sons
Townville	J. M. Hobson, M. D.
Williamston	Guyton Drug Co.

BAMBERG COUNTY.

Bamberg	Mack's Drug Store
Denmark	Peoples Pharmacy
Ehrhardt	Fender-Kinard Drug Co.
Olar	R. & H. Drug Store

BARNWELL COUNTY.

Allendale	R. P. Searson Drug Co.
Barnwell	Mace Drug Co.
Blackville	C. A. Epps
Fairfax	Fairfax Drug Store
Williston	J. M. Smith & Son

BEAUFORT COUNTY.

Beaufort	C. G. Luther
Port Royal	M. B. Cope

BERKELEY COUNTY.

Moncks Corner	Moncks Corner Drug Store
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CALHOUN COUNTY.

St. Matthews	Fair's Pharmacy
Fort Motte	Fort Motte Drug Co.

CHARLESTON COUNTY.

Charleston	Roper Hospital, G. W. Aimar & Co. D. P. Frierson, C. F. Schwetmann & Son, L. G. Melfi.
Mt. Pleasant	Mt. Pleasant Pharmacy

CHEBOKEE COUNTY.

Blacksburg	Iron City Pharmacy
Gaffney	Gaffney Drug Co.

CHESTER COUNTY.

Chester	Chester Drug Co.
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CHESTERFIELD COUNTY.

Cheraw	T. E. Wannamaker & Sons
Chesterfield	D. H. Laney
Jefferson	P. T. Gantt Drug Store
McBee	McBee Drug Co.
Pageland	Kennington's Pharmacy
Ruby	Kennington's Pharmacy

CLARENDON COUNTY.

Manning	Dickson's Drug Store
Paxville	Thomas W. Gunter
Summerton	Summerton Drug Co.
Turbeville	C. E. Gamble
New Zion	E. B. Gamble, M. D.

COLLETON COUNTY.

Walterboro	Walterboro Drug Co.
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DARLINGTON COUNTY.

Darlington	McFall's Drug Store
Hartsville	Robert Stewart, Jr.
Lamar	Palmetto Drug Co.

DILLON COUNTY.

Dillon	Evans Pharmacy, Moody Drug Co.
Latta	Peoples Drug Co.
Page's Mill	Smith's Pharmacy

DORCHESTER COUNTY.

St. George	P. N. Judy
Summerville	Tupper Pharmacy Co.

EDGEFIELD COUNTY.

Edgefield	J. D. Holstein
Johnston	Peoples Drug Co.

FAIRFIELD COUNTY.

Ridgeway	B. G. Team, M. D., Ridgeway Pharmacy
Winnsboro	J. H. McMaster & Co.
Blythewood	M. Langford

FLORENCE COUNTY.

Florence	F. U. Lake Drug Co.
Lake City	Lake City Drug Co.
Scranton	W. S. Lynch
Timmons ville	Marvin Drug Co., Cole Drug Co.

GEORGETOWN COUNTY.

Georgetown	Iseman Drug Co.
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GREENVILLE COUNTY.

Fountain Inn	Redick's Pharmacy
Greenville	Carpenter Bros., L. H. Stringer
Greer	Corner Drug Co.
Piedmont	Suber Drug Co.
Simpsonville	Simpsonville Drug Co.

GREENWOOD COUNTY.

Greenwood	Harris Drug Co., Greenwood Drug Co.
Ninety-Six	Holmes Pharmacy
Ware Shoals	Ware Shoals Mfg. Co. (Drug Dept.)
Troy	Troy Drug Store

HAMPTON COUNTY.

Estill Estill Pharmacy
 Hampton Charles A. Rush

HORRY COUNTY.

Conway Conway Drug Co.
 Aynor Aynor Drug Store

JASPER COUNTY.

Ridgeland A. Ritters, Jr.

KERSHAW COUNTY.

Bethune Bethune Drug Co.
 Camden W. R. Zemp

LANCASTER COUNTY.

Heath Springs W. T. Stover & Sons
 Kershaw Hays and Gregory
 Lancaster Standard Drug Co.

LAURENS COUNTY.

Clinton Kellers Drug Store
 Gray Court Gray Court Drug Store
 Laurens Powe Drug Store, Putnam's Drug Store
 Cross Hill J. H. Miller, M. D.

LEE COUNTY.

Bishopville Parker Drug Co.

LEXINGTON COUNTY.

Batesburg Ridgell Drug Co.
 Chapin J. W. Eargle
 Leesville Citizens' Drug Co.
 Lexington Palace Drug Co., Harmon Drug Co.
 Pelion D. R. Kneece
 Swansea Swansea Drug Co.

McCORMICK COUNTY.

McCormick McCormick Drug Co.

MARION COUNTY.

Marion J. S. Davis
 Mullins Palace Drug Co., Kirby's Pharmacy
 Nichols Nichols Pharmacy

MARLBORO COUNTY.

Bennettsville Douglas & Breeden
 Blenheim Napier's Drug Store
 Clio Blackman & McInnis Drug Co.
 McColl Moore Drug Co.

NEWBERRY COUNTY.

Little Mountain J. M. Sease
 Newberry Gilder & Weeks, Mayes Drug Store
 Prosperity Prosperity Drug Co.

OCONEE COUNTY.

Clemson College	L. C. Martin
Fairplay	W. C. Mays
Seneca	Seneca Pharmacy
Walhalla	J. W. Bell, M. D.
Westminster	Stonecypher Drug Co.

ORANGEBURG COUNTY.

Branchville	Pipkin Pharmacy
Elloree	P. L. Felder
Eutawville	E. O. Horger
North	People's Drug Store
Orangeburg	Wannamaker Drug Co.
Springfield	Springfield Drug Co.

PICKENS COUNTY.

Central	Central Drug Co.
Easley	Palmetto Pharmacy
Liberty	Hunter's Pharmacy
Pickens	Pickens Drug Co.

RICHLAND COUNTY.

Columbia	Blanding Street Drug Store, McGregor's Drug Store, Taylor Drug Co., Wingfield's Pharmacy
New Brookland	Burnett & Whetsell

SALUDA COUNTY.

Ridge Spring	Ridge Drug Co.
Saluda	Saluda Drug Co.

SPARTANBURG COUNTY.

Campobello	Campobello Drug Co.
Converse	Peoples Drug Store
Cowpens	Cowpens Drug Co.
Inman	Inman Drug Co.
Landrum	W. M. Lambright
Pacolet	Pacolet Mfg. Co.
Spartanburg	Arthur Irwin, Ligon's Drug Store K-W-N Pharmacy, Todd Drug Co.
Woodruff	O. E. Westmoreland

SUMTER COUNTY.

Mayesville	The Peoples Pharmacy
Sumter	Sibert's Drug Store

UNION COUNTY.

Jonesville	Jonesville Drug Co.
Union	People's Drug Store, Glymph's Pharmacy
Carlisle	Carlisle Drug Co.

WILLIAMSBURG COUNTY.

Greeleyville	Service Drug Co.
Johnsonville	Cockfield Drug Co.
Kingstree	Kingstree Drug Co.

YORK COUNTY.

Clover	Clover Drug Co.
Fort Mill	Lyttles Drug Co.
Rock Hill	Rock Hill Drug Co.
Sharon	Sims Drug Co.
Yorkville	York Drug Co.

TYPHOID FEVER.

In combatting no disease, has the intelligent effort put forward by the State Board of Health borne such continued excellent returns as in our fight against typhoid fever. We have reduced the death rate from 21.9 in 1919 to 18. per 100,000 in 1920. We have distributed 31,735 ampules since last year and this represents the inoculation of 10,578 people. There were, however, 2,620 cases of typhoid fever in the first ten months of the year. This is entirely too many cases and we are fighting hard to reduce the death rate down to at least 10. per 10,000 population, which is what North Carolina has done.

Upon the occurrence of an epidemic in a community, we send out the following rules for preventing typhoid fever:

For the Individual:

1. Keep away from all known or suspected cases of typhoid.
2. Wash hands thoroughly before meals. Do not use "roller towels."
3. Use drinking water only from sources known to be pure, or, if this is not possible, use water that has been purified by municipal filtration or by hypochlorite treatment or by boiling in the household.
4. Avoid bathing in polluted water.
5. Use pasteurized or boiled, instead of raw milk.
6. Select and clean vegetables or berries, that are to be eaten raw, with greatest care.
2. Avoid eating "fat" raw oysters, and in general, oysters and other shellfish whose origin is not known.
8. Be vaccinated against typhoid in all cases in which any special exposure is known or feared.

For the Community:

1. Insist on the hearty cooperation of all persons with an efficient health officer.
2. Require notification and a reasonable degree of isolation of every known or suspected typhoid case.
3. Exercise strict control over the disinfection of known typhoid excreta.
4. Insist on pure or purified water supplies.
5. Require pasteurization of milk supplies.
6. Regard all human excreta as possibly dangerous, and control their disposition in such a way to prevent contamination of food and drink.

DEATHS FROM TYPHOID FEVER IN THE FOLLOWING COUNTIES FOR
TEN MONTHS ENDING OCTOBER 31 1919 and 1920.

Counties.	Number 1919.	Number 1920.
Abbeville	5	4
Aiken	9	1
Allendale	4	5
Anderson	13	7
Bamberg	4	5
Barnwell	8	3
Beaufort	2	4
Berkeley	15	4
Calhoun	14	4
Charleston	14	17
Cherokee	3	4
Chester	4	9
Chesterfield	6	4
Clarendon	9	7
Colleton	2	3
Darlington	6	2
Dillon	5	3
Dorchester	3	6
Edgefield	7	5
Fairfield	5	2
Florence	15	13
Georgetown	4	5
Greenville	6	7
Greenwood	7	5
Hampton	4	3
Horry	3	6
Jasper	2	1
Kershaw	5	7
Lancaster	5	2
Laurens	3	8
Lee	6	4
Lexington	7	6
Marion	5	2
Marlboro	15	16
McCormick	2	2
Newberry	5	3
Oconee	6	7
Orangeburg	9	15
Pickens	10	3
Richland	9	13
Saluda	4	2
Spartanburg	15	14
Sumter	11	12
Union	1	1
Williamsburg	2	6
York	9	5
Total	294	262

TUBERCULOSIS.

A careful perusal of the report of the South Carolina Sanatorium shows what good work it is doing. The negro sanatorium, which is known as the Palmetto Sanatorium, has been opened the latter part of the year, and we feel that good work will be done in educating the negroes as to the danger of the disease and in that way helping to combat its spread. This year again shows a drop in the number of deaths, there having been, 1,242 reported pulmonary tuberculosis. We are appending a table showing the number of deaths in 1919 and 1920.

DEATHS FROM TUBERCULOSIS, ALL FORMS, IN THE FOLLOWING COUNTIES FOR TEN MONTHS ENDING OCTOBER 31, 1919 and 1920.

Counties.	Number 1919.	Number 1920.
Abbeville	15	21
Aiken	29	32
Allendale	20	25
Anderson	50	39
Bamberg	13	10
Barnwell	13	16
Beaufort	14	6
Berkeley	9	10
Calhoun	14	18
Charleston	100	114
Cherokee	24	15
Chester	20	17
Chesterfield	19	14
Clarendon	23	10
Colleton	7	5
Darlington	35	51
Dillon	5	14
Dorchester	15	18
Edgefield	16	14
Fairfield	20	13
Florence	40	54
Georgetown	30	13
Greenville	112	167
Greenwood	25	23
Hampton	18	17
Horry	7	11
Jasper	2	4
Kershaw	26	17
Lancaster	31	27
Laurens	38	32
Lee	24	18
Lexington	13	16
Marion	18	8
Marlboro	36	33
McCormick	12	9
Newberry	37	25
Oconee	15	19
Orangeburg	48	38
Pickens	19	14
Richland	111	102
Saluda	6	4
Spartanburg	179	89
Sumter	49	40
Union	21	19
Williamsburg	29	33
York	59	43
Total	1,466	1,337

MEASLES.

Measles has not been epidemic this year to any extent in South Carolina. There have been 13 deaths in the State, and the main effort has been to make people understand that measles was a disease which predisposed to other diseases and that a person with measles must be taken care of as broncho-pneumonia frequently follows it and death results from broncho-pneumonia.

We print again the methods found best for the control of this disease:

(A) *The Infected Individual and His Environment:*

1. Recognition of the disease—clinical symptoms. Special attention to the rise of temperature. Koplik spots and catarrhal symptoms in exposed individuals.
2. Isolation—during period of communicability.
3. Immunization—none.
4. Quarantine—exclusion of exposed susceptible school children and teachers from school 14 days from last exposure. This applied to exposure in the household. Exclusion of exposed susceptible children from all public gatherings from the same period.
5. Concurrent disinfection—thorough cleansing.

(B) *General Measures:*

1. Daily examination of exposed children and of other possibly exposed persons. This examination should include record of the body temperature. A non-immune exposed individual exhibiting a rise of temperature of 100 degrees F. or more should be promptly isolated pending diagnosis.
2. Schools should not be closed or classes discontinued where daily observation of the children by a doctor or nurse is available.
3. Education as to special danger of exposing young children to those exhibiting acute catarrhal symptoms of any kind.

WHOOPIING COUGH.

Whooping cough showed an increase in the number of deaths for 1920. Whooping cough cases should not be kept in the house

but should be designated in some way so that people with children under two years of age would not expose them to this disease, which is extremely fatal to such children. It is a crime to carry a child with whooping cough into a crowded street car, railway train, or any assembly of people where babies may be exposed, and as soon as public sentiment realizes this it will be made a serious offense. A large number of children die annually from whooping cough and its complications, and if the public understood this they would not take their children with whooping cough to moving pictures, nor would they travel up and down the street exposing other people's children to this disease. It is not a particularly fatal disease if the child is over four years of age, and surely we ought to be able to protect the infants, those under two years of age, from coming in contact with whooping cough.

CEREBRO-SPINAL MENINGITIS.

There were 30 deaths from this disease during 1920, as compared with 40 last year and 207 the year before. The State Board of Health furnishes antimeningococcic serum free, which has proved a great factor in checking the mortality of this disease.

MALARIA.

We present under the head of Malaria Dr. Fisher's report, and also the report of the Subcommittee on Medical Research of the National Malaria Committee of the United States Public Health Service. There were about 215 deaths from malaria in this State for the past year. This is probably a very small proportion of the number of those who died of this disease. The economic importance of malaria cannot be too greatly emphasized. We must get rid of malaria in South Carolina if we are going to have white immigrants. Every effort of the State Board of Health will be used toward educating the public on how to get rid of malaria. As soon as the public conscience is awakened, malaria will be banished from many portions of the State, and many counties of the State which are now given over to negroes and negro tenants will be occupied by white people, and the fertile soil of these counties properly utilized.

MALARIAL CONTROL WORK.

Columbia, S. C., Dec. 7, 1920.

Dr. James A. Hayne State Health Officer.

Columbia, S. C.

Dear Dr. Hayne: The malarial control work done this year was largely in the nature of a demonstration of what could be done in a year's time. Under a cooperative agreement entered into with the U. S. Public Health Service and the International Health Board consistent systematic work was carried on at three places, Bamberg, Chester and Hartsville.

These places were selected because of the typical problems at each place and because of their location in the State. At Bamberg there was a great deal of malaria among the population and the problem was a very difficult one. Doctors reported as high as 90 per cent. of their summer practice as being for malaria. A house to house census covering a large part of the town showed that in 1919 nearly 40 per cent. of the population was infected. The infection was kept alive principally through the agency of *Anopheles Crucians*, which bred very profusely in this region. Our work resulted in a reduction of 80 per cent. of the malaria that occurred there in 1919, which is regarded as a very good showing for the first year.

At Chester the problem was entirely different and less difficult. Our census showed about 8 per cent. of the population infected. The infection was spread apparently entirely by *Anopheles Punctipennis*. This is regarded as a very significant fact by malaria experts since it has generally been conceded that *Punctipennis* are not as important vector in the natural spreading of malarial infection. Our work disclosed that where there is prolific breeding of *punctipennis* closed to residences and where no other *Anopheles* mosquitoes are found, malaria will persist as long as the breeding is unchecked. As at Bamberg we effected a malaria reduction of approximately 80 per cent. in the first year.

At Hartsville malaria control work has been carried on by the town authorities since about 1906, when such work was being done at Panama. Our work there was undertaken in order to supplement and extend what had already been done. Our census indicated the presence of less malaria than had been anticipated; in fact, it was found to be almost negligible, being less than four-

tenths of one per cent. This finding testifies eloquently to the effectiveness of the work as carried on by the town, in past years.

The following tabulation shows results obtained at each of the towns in which work was done.

Bamberg, Population 2,311.

Year.	Number of Cases.	Economic Loss.
1918	693	\$34,650 00
1919	1,016	50,800 00
1920	170	8,500 00

Chester, Population 5,500.

Year.	Number of Cases.	Economic Loss.
1918	302	\$15,100 00
1919	411	21,154 00
1920	53	2,650 00

Hartsville, Population 3,624.

Year.	Number of Cases.	Economic Loss.
1918	11	\$396 00
1919	10	510 00
1920	4	200 00

The total cost of permanent work at all three places was approximately \$41,000.00. The saving during the first year alone was in excess of \$60,000.00. The work, in other words, was paid for out of the first year's savings with a very wide margin for surplus account. The savings resulting in future years should be practically as large as during the first year and will all accrue to the credit of the wealth of the community and of the State. Besides the financial aspect there is really the more important aspect of the prevention of a great deal of human sickness, misery and some deaths.

In addition to the services of the undersigned, which were supplied without cost to the State, the State benefited by the services, at various times and for various periods, of Mr. A. E. Gorman and Mr. C. E. Buck of the International Health Service and of those of Mr. T. B. Hayne of the U. S. Public Health Service. And in addition to these men we had the benefit of the wisdom and experience of such experts in malaria control work as Assistant Surgeon General, H. R. Carter, Senior Sanitary Engineer,

J. A. LePrince and Epidemiologist T. H. D. Griffiths of the U. S. Public Health Service.

In addition to the active work carried on at the towns above referred to preliminary malaria surveys were made at, Edgefield, Summerville, St. George, Olar, Hampton, Georgetown, Dillon, Eau Claire, Manning and Andrews. These surveys alone stimulated interest in malaria control work and had a beneficial educational effect.

At Lockhart the mill authorities did a certain amount of field work at our suggestion at their own expense.

Negotiations are under way with certain manufacturing interests who have approached us with a view of assisting them in selecting a location which can be kept free of malaria infection in a portion of the State where malaria seriously prevails.

It is believed that the first year's work fully demonstrates the value of this kind of public health work and the wisdom of supporting and maintaining it, and that as rapidly as the public learns of the value of this work to them they will heartily demand and support it.

Respectfully submitted,

L. M. FISHER,

Associate Sanitary Engineer, U. S. Public Health Service.

Report of the Subcommittee on Medical Research of the National Malaria Committee of the United States Public Health Service is as follows:

"The Subcommittee on Medical Research of the National Malaria Committee presents the following as a standard method of treatment of malaria for the purpose of curing the patient of his infection, and recommends its general use by the medical profession. We believe that this treatment will, in the great majority of cases, prevent relapses in the patients themselves and also prevent transmission of infection to others.

"Our opinion is based largely upon the results of the treatment by this method, under average conditions, in their homes, of a large number of persons infected with malaria.

"For the acute attack, 10 grains of quinine sulphate by mouth three times a day for a period of at least three or four days, to be followed by ten grains every night before retiring for a period of eight weeks. For infected persons not having acute symptoms at the time, only eight weeks' treatment is required.

"The proportionate doses for children are: Under one year, 1-2 grain; one year, 1 grain; two years, 2 grains; three and four years, 3 grains; five, six and seven years, 4 grains; eight, nine and ten years, 6 grains; eleven, twelve, thirteen and fourteen years, 8 grains; fifteen years or older, 10 grains.

"It is not claimed that this is a perfect and even the best treatment in all cases, but it is our belief that it is a good and satisfactory method for practical use to prevent relapse and transmission to other people."

If the method outlined above is carried out it is believed that we can successfully combat malaria.

REPORT OF WORK DONE BY DR. A. H. HAYDEN, EPI- DEMIOLOGIST, STATE BOARD OF HEALTH, FROM AUG. 25, to DEC. 31, 1920. INCLUSIVE.

August 25-31.—Investigation of outbreak of smallpox in Horse Creek Valley, between Aiken, S. C., and Augusta, Ga., in the mill villages of Langley, Bath, Clearwater, S. C., and vicinity, and vaccinating of the children of the public schools.

September 4-5.—Visit to Parksville, S. C., on petition of Mayor and about thirty leading citizens to look into general sanitary conditions of town, and advise with the town authorities and the local board of health relative to steps to be taken for improvement of the same.

September 8.—Inspection of children of public schools vaccinated in Langley, Bath and Clearwater in August and investigation of conditions relative to recent smallpox outbreak at those places.

September 9-10.—Investigation of reported outbreak of typhoid fever in the mill villages of Union Bleaching and Finishing Co. plant in the vicinity of Greenville, S. C., and the determination of the cause of same.

September 11.—Investigation of outbreak of typhoid fever in Seneca, S. C.

September 16.—Investigation of outbreak of Diphtheria in Cayce and New Brookland, S. C., including personal inspection of all persons in twelve houses in the places where the infection was suspected or known to exist.

September 21-22.—Visit to Latta, S. C., by request to consult with the town authorities relative to conditions of barber and butcher shops, and to advise with the same relative to the general sanitary conditions of the town.

September 23.—Visited Langley, S. C., on telegram from superintendent of public schools urging immediate investigation of a reported case of threatened blindness of a child from septic (?) infection, only to find that there was nothing the matter with the child's eyes and no reason whatever for the rumor current relative to the same.

October 5-6.—Visited Eutawville, S. C., on request to Dr. Hayne, State Health Officer, for a general survey of the town, with the betterment of the general sanitary conditions and a consultation with the town authorities as the object of the visit.

October 16-20.—Visited Greenville, S. C., to investigate outbreak of diphtheria in that city, and especially in Monaghan Mill village.

October 21.—Visited Union, S. C., to investigate reported outbreak of typhoid fever in the Monarch Mills Village.

October 25-26.—Visited Leesville, S. C., to investigate an outbreak of scarlet fever in that city.

October 28.—Visited Graniteville, S. C., in compliance with request of State Health Officer to take immediate steps to have the children of the schools of that place vaccinated.

October 29.—On complaint to State Health Officer, visited Cayce, S. C., to investigate reported cases of diphtheria and scarlet fever.

November 1.—Visited Ruby, S. C., in response to request from the citizens of that place for a general sanitary inspection of the town and a consultation with the authorities of same as to steps necessary to be taken for a general betterment of conditions.

November 16.—Visited Graniteville, S. C., for purpose of inspecting children of the schools previously vaccinated and to vaccinate others that had not been vaccinated on previous visit.

November 17.—Visited Warrenville, S. C., and vaccinated children in the public school.

November 18-21.—In Columbia in compliance with instructions from the State Health Officer in connection with matters to do with epidemic diseases.

November 24-25.—Visited Belton, S. C., to investigate a reported outbreak of smallpox in the Belton Mill Village.

November 26.—Visited Salley, S. C., to investigate conditions connected with an outbreak of smallpox in that town.

November 27.—Visited Pelion, S. C., to investigate reported outbreak of smallpox in Pelion and vicinity.

November 23.—Visited Wagener, S. C. to investigate reported outbreak of smallpox.

November 27.—Investigated a reported outbreak of typhoid fever in Pacific Mills Village in the suburbs of Columbia, S. C.

December 3-4.—Visited Moncks Corner, Strawberry, S. C., and vicinity to investigate outbreak of smallpox.

December 7-8.—Visited Blackville, S. C., to investigate reported case of meningitis.

December 11.—Visited Dixiana, S. C., to investigate reported cases of smallpox.

December 20.—Visited Hood Branch School, eight miles from Pelion, S. C., to advise by request of school authorities relative to enforcement of compulsory vaccination law and to vaccinate unvaccinated children.

December 21-23.—In Columbia in compliance with instructions from State Health Officer in connection with control of epidemic diseases.

INFLUENZA.

The influenza epidemic this year, which started in January and continued through February and March, was milder than the year before, and there were only 653 deaths in 1920 as compared with 866 in 1919. There were only 874 deaths of bronchopneumonia as compared with 893 the year before. There were 1,526 deaths from pneumonia as compared with 1,729 in 1919. This was a tremendous death rate, however, for this State, and we feel that this year we can hope that there will be no repetition of the influenza epidemic in the proportions that we have had it. There will be influenza in 1921, but it will be in sporadic case and no severe general epidemic need be feared. However, we recommend that the same precautions be taken, should an epidemic develop in a given county, as were undertaken in 1920. Schools, however, should not be closed except after consultation with the health authorities on the part of the trustees of the school.

MINUTES

Columbia, S. C., March 11, 1920.

The regular quarterly meeting of the Executive Committee of the State Board of Health was held in the office of the Secretary at 9:30 a. m., March 11, 1920, with the following members present: Dr. Robert Wilson, Jr., Chairman; Dr. R. A. Marsh, Dr. C. C. Gambrell, Dr. E. A. Hines, Dr. William Egleson, Dr. W. W. Dodson, Dr. W. M. Lester, S. M. Wolfe, Attorney General; R. L. Osborne, Comptroller General, and the Secretary.

The minutes of the last meeting were read and approved.

The first business before the Committee was the awarding of the contract for the distribution of diphtheria antitoxin, vaccine and smallpox vaccine virus in South Carolina for the fiscal year commencing July 1, 1920. Bids were submitted by the following firms: National Vaccine and Antitoxin Institute; H. K. Mulford Company; Gilliland Laboratories; E. R. Squibb and Sons. On opening the bids and discussion of same it was decided that all bids be rejected, and that a committee consisting of Dr. James A. Hayne, Dr. W. M. Lester and Dr. F. A. Coward should make a careful investigation in regard to diphtheria antitoxin and its distribution in the State, and submit, if they deem necessary, new specifications for bids. This Committee was given power to do everything necessary toward securing the best of service in the distribution of the antitoxin and to make a full report in the Greenville meeting of the South Carolina Medical Association.

The next business before the meeting was a talk from Comptroller General Osborne giving advice upon the proper carrying out of the provisions of the Appropriation Act under the budget classifications.

The election of a State Sanitary Inspector of Hotels and Restaurants under an Act passed by the General Assembly at its recent session and approved by the Governor on March 6, 1920, was next taken up. There were a number of applications. After a ballot was taken Mr. J. H. Woodward of Columbia was elected at tentative salary of \$3,000.00 per year and traveling expenses.

The attention of the Committee was next given to a hearing of Dr. J. W. Jervey of Greenville in regard to the diagnosis of

trachoma. Drs. Kibler, Whaley, Coward and Mikell were present in response to an invitation and took part in the discussion. It was moved and carried that a committee of seven ophthalmologists, members of the South Carolina Medical Association, should be appointed by the president of the South Carolina Association to make an investigation and report to the Association at its April meeting in Greenville, first, on the prevalence of trachoma in this State; second, on whether cases diagnosed as trachoma should be excluded from school; and third, to clear up, as far as possible, any confusion existing as to the essential differences between follicular conjunctivitis and trachoma; this report to be used as a guide by the Executive Committee of the State Board of Health in its dealings with these cases.

The next business before the Committee was the election of a County Health Officer for Charleston County. On recommendation of the State Health Officer, as provided in the Act of the General Assembly, approved by the Governor on March 11, 1920, creating this department for Charleston County, Dr. Leon Banov was declared elected to serve for four years according to the provisions of the Act.

The awarding of the contract for completing the Palmetto Sanatorium next came up for attention. This contract was given to Mr. W. B. Summersett for \$16,340.00.

The appointment of an assistant physician for the South Carolina Sanatorium, being the next subject under discussion, was left to a committee composed of Drs. Hayne, Lester and Cooper.

There being no further business before the Committee the meeting was adjourned, the next meeting, being the annual meeting, to be held in Greenville, April 19, 1920.

JAMES A. HAYNE, M. D., Secretary.

Attested.

Greenville, S. C., April 19, 1920.

The annual meeting of the Executive Committee of the State Board of Health was held at the Hotel Imperial, Greenville, S. C., at 8:30 p. m., April 19, 1920, with the following members present: Dr. Robert Wilson, Jr., Chairman; Dr. R. A. Marsh, Dr. C. C. Gambrell, Dr. William Egleston, Dr. W. W. Dodson, Dr. W. M. Lester, and the Secretary, Dr. James A. Hayne.

The minutes of the last meeting were read and approved.

The first business before the meeting was the awarding of the contract for the free distribution of diphtheria antitoxin, typhoid bacterin and smallpox vaccine virus. After careful consideration of all bids the contract was given to the Gilliland Laboratories of Ambler, Pa., whose bids were, in the aggregate, the lowest submitted. Following is a copy of the contract entered into with the Gilliland Laboratories:

CONTRACT FOR SUPPLYING BIOLOGICAL PRODUCTS.

Articles of Agreement entered into this nineteenth day of April, A. D. 1920, at Greenville, South Carolina, by and between the Executive Committee of the South Carolina State Board of Health, hereinafter known as the party of the first part, and the Gilliland Laboratories of Ambler, Pa., hereinafter known as the party of the second part.

Witnesseth:

1. The party of the First Part agrees that the party of the Second Part shall have the exclusive right to supply all diphtheria antitoxin, vaccine virus (smallpox vaccine) and typhoid vaccine used by or under the direction of the South Carolina State Board of Health for a period of one year beginning July 1, 1920.

2. The party of the Second Part specifically agrees to supply the products enumerated in paragraph 1 hereof at the respective prices set opposite each item, and agrees that all diphtheria antitoxin supplied under this contract shall have as a minimum concentration the strength opposite each respective size package.

DIPHTHERIA ANTITOXIN.

Size.	Concentration per cc.	Price.
1,000 units	600	\$0.40
5,000 units	1,200	1.45
10,000 units	1,800	2.40
20,000 units	2,250	4.50

VACCINE VIRUS.

(Smallpox Vaccine.)

In packages of ten tubes each, per tube.....\$0.06½

TYPHOID VACCINE.

Hermetically sealed glass ampules, per ampule\$0.07

3. The party of the First Part agrees to pay for such products as may be used by them or under their direction at the prices set forth in paragraph 2 hereof, and to remit for same monthly.

4. The party of the Second Part agrees to employ clerks to supervise the distribution of said products, for which service said Second Party agrees to pay \$50.00 per month for supervising the distribution of diphtheria antitoxins; \$50.00 per month for supervising the distribution of vaccine virus; and \$10.00 per month for supervising the distribution of typhoid vaccine.

5. The party of the Second Part agrees to pay all State Distributors of diphtheria antitoxin a commission of 10 per cent. upon all diphtheria antitoxin distributed by them, said commission to be based upon the prices set forth in paragraph 2 hereof.

6. The party of the Second Part further agrees to exchange without charge, other than the charge of transportation, all packages upon which the potency date has expired for fresh products of the same character.

7. The party of the Second Part further agrees to install, at its own expense, an efficient system for the distribution and supply of diphtheria antitoxin throughout the State.

8. The party of the Second Part agrees to supply all diphtheria antitoxin and typhoid vaccine under a special label, to be approved by the Secretary of the South Carolina State Board of Health, which label shall set forth in a conspicuous manner that the same is for free distribution under the supervision of the South Carolina State Board of Health and not for sale.

9. The party of the Second Part further agrees to attach a suitable label on all packages of vaccine virus (smallpox vaccine), in addition to the regular label, which special label shall set forth in a conspicuous manner that the same is for free distribution under the supervision of the South Carolina State Board of Health and not for sale.

10. The party of the Second Part agrees and guarantees to supply vaccine virus of known potency and that all products supplied under this contract shall meet each and every requirement of the United States Public Health Service.

11. The party of the Second Part further agrees to any reasonable change or modification of the plan of distribution which the party of the First Part may deem advisable or expedient; to establish such additional distributing depots as may be nec-

essary in the opinion of the South Carolina State Board of Health, and specifically agrees that this contract may be continued from year to year upon the same terms and conditions unless either party shall advise the other of a desire to discontinue or annul the same, ninety days prior to the expiration of any one year.

12. The party of the Second Part agrees and has deposited with the Secretary of the State Board of Health two Surety Bonds for \$1,000.00 each, guaranteeing the faithful performance of this contract.

In witness whereof we have set our hands and affixed our seal this nineteenth day of April, A. D. 1920, in duplicate.

EXECUTIVE COMMITTEE, SOUTH CAROLINA STATE BOARD OF
HEALTH,

By JAMES A. HAYNE, (L. S.)
Secretary, State Board of Health.

THE GILLILAND LABORATORIES,

By FRED S. CAMPBELL, (L. S.)
Director of Sales Service.

Signed and Sealed in the presence of:

C. M. Ruth.

W. L. Day.

The next business was the election of officers. Dr. Robert Wilson, Jr., was reelected chairman; Dr. James A. Hayne was reelected Secretary and State Health Officer.

The Board adjourned to meet at 9:30 a. m., the next day.

JAMES A. HAYNE, M. D., Secretary.

Attested.

Greenville, S. C., April 20, 1920.

The Executive Committee of the State Board of Health met, as arranged for on the preceding day, at 9:30 a. m., at the Imperial Hotel, Greenville, with all members present who had attended the meeting on the 19th.

The business before the meeting was consideration of a resolution submitted by the special committee of ophthalmologists,

appointed by the Board at its meeting on March 11th to investigate the prevalence of contagious diseases of the eye in South Carolina and to recommend measures of control for these diseases. The resolution was approved and adopted as follows:

"Any child or pupil attending school with inflammation of the eye or eyes and a more or less purulent discharge must be excluded until the discharge has stopped for at least five days, and may be admitted again on the certificate of a competent physician stating that such time has elapsed and that the disease in all probability is no longer contagious."

There being no further business the Board adjourned to meet at the call of the Chairman.

JAMES A. HAYNE, M. D.,
Secretary.

Attested.

Columbia, S. C., June 29, 1920.

The Third Quarterly Meeting of the Executive Committee of the State Board of Health was held June 29th, 1920, at 9:30 a. m., in the office of the Secretary, with the following members present: Dr. Robert Wilson, Jr., Chairman, Dr. Wm. Egleston, Dr. C. C. Gambrell, Dr. Wm. Lester, Dr. Robt. A. Marsh, Dr. W. W. Dodson, Morris C. Lumpkin, Assistant Attorney General, and the Secretary.

The minutes of the previous meeting were read and approved.

The first business before the Board was the discussion on the regulation and sale of condensed skimmed milk. After a thorough discussion, the Board decided that with the evidence before them, that the unrestricted sale of condensed and evaporated skimmed milk was dangerous to public health, and reaffirmed their former position of 1912. The Assistant Attorney General and the State Health Officer were appointed a committee to draw up proper regulations to protect the public, especially invalids and babies, from the sale of condensed or evaporated skimmed milk.

The next business taken up was a discussion of the needs of the South Carolina Sanatorium. The following resolution was introduced by Dr. Gambrell: "Resolved, That the Superintendent be empowered to employ such help as is necessary for the efficient management of the Sanatorium." Passed. The follow-

ing were introduced by Dr. Egleston and passed: "Resolved, That the committee on the Sanatorium shall consist of three members of the Board, with the Secretary *ex officio* member, who will pledge themselves to visit the Sanatorium once each month, and to make careful observation of conditions at the Sanatorium, and embody same in a collective or in an individual written report to the Executive Committee." "Resolved, That the Committee be empowered to create an Aid Society for the purpose of creating interest in the Institution. The resignation of Miss Carrie Spivey as Head Nurse at the Sanatorium was withdrawn, and Miss Spivey will, therefore, continue her work as Head Nurse.

Mr. Filby, State Sanitary Engineer, appeared before the Board, and stated that he had compiled some data upon what was being done in other States by the Engineering Department. Mr. Filby was directed to compare a complete report of the Engineering Departments of neighboring Southern States, and make recommendations to the board for suitable legislation in South Carolina, based upon these reports.

The following resolution was introduced by Dr. Egleston, and passed: "Resolved, That the Executive Committee of the State Board of Health meet once in every two months, at the call of the chairman."

The following Ordinance for the Prevention of Mosquito Breeding in Incorporated Towns was read by Capt. L. M. Fisher, in charge of malarial control work in South Carolina, and approved by the Board:

Section 1. It shall be unlawful to have, keep, maintain, cause or permit within the limits of any collection of standing or flowing water in which mosquitoes breed or are likely to breed, unless such collection of water is treated so as to effectually prevent such breeding.

Section 2. Any collections of water considered by Section 1 of this ordinance shall be held to be those contained in ditches, pools, ponds, excavations, holes, depressions, open cesspools, privy vaults, fountains, cisterns, tanks, shallow wells, barrels, troughs (except horse troughs in frequent use), urns, cans, boxes, bottles, tubs, buckets, defective house roof gutters, tanks of flush closets, or other similar water containers.

Section 3. The methods of treatment of any collections of water, that are specified in Section 2, directed towards the pre-

vention of breeding of mosquitoes, shall be approved by the accredited health officer, and may be any one or more of the following:

(a) Screening with wire netting of at least 16 meshes to the inch each way, or with any other material which will effectually prevent the ingress or egress of mosquitoes.

(b) Complete emptying every seven days of unscreened containers, together with their thorough drying or cleaning.

(c) Using a larvacide approved and applied under the direction of the health officer.

(d) Covering completely the surface of the water with kerosene, petroleum, or paraffin oil once every seven days.

(e) Cleaning and keeping sufficiently free of vegetable growth and other obstructions, and stocking with mosquito destroying fish.

(f) Filling or draining to the satisfaction of the health officer, his agent or accredited representative.

(g) Proper disposal, by removal or destruction, of tin cans, tin boxes, broken or empty bottles, and similar articles likely to hold water.

Section 4. The natural presence of mosquito larvae in standing or running water shall be evidence that mosquitoes are breeding there, and failure to prevent such breeding within three days after notice by the health officer, his authorized agent, or representative, shall be deemed a violation of this ordinance.

Section 5. Should the person or persons responsible for conditions giving rise to the breeding of mosquitoes fail or refuse to take necessary measures to prevent the same, within three days after due notice has been given to them, the health officer, or his authorized agent, is hereby authorized to do so, and all necessary costs incurred by him for this purpose shall be a charge against the property owner or other person offending as the case may be.

Section 6. For the purpose of enforcing the provisions of this ordinance, the health officer, or his duly accredited agent acting under his authority, may, at all reasonable times, enter in and upon any premises within his jurisdiction; and any person or persons charged with any of the duties imposed by this ordinance failing within the time designated by this ordinance or within the time stated in the notice of the health officer, as the case may

be, to perform such duties, or to carry out the necessary measures to the satisfaction of the health officer, shall be deemed guilty of violation of this ordinance, and for each day after the expiration of this time said person fails to comply with this ordinance shall be deemed guilty of a separate violation of this ordinance.

Section 7. Any person who shall violate any provision of this ordinance shall, on each conviction, be subject to a fine of not less than one dollar (\$1.00) or more than twenty-five (\$25.00), in the discretion of the Court. All Acts or parts of Acts in conflict with this ordinance are hereby repealed, and this ordinance shall be in full force and effect days after its approval.

Passed this the day Signed

Approved this the day Signed

This ordinance forms a supplement to the memorandum regarding procedure to be followed in the control of malaria through the cooperation of the United States Public Health Service, the State Board of Health, selected towns, and the International Health Board.

There being no further business the Board adjourned to meet at the call of the Chairman.

JAMES A. HAYNE, M. D.,
Secretary.

Attested.

Resolved, That the Executive Committee of the State Board of Health meet once in every two months at the call of the chairman.

Resolved further, That this Committee be empowered to create, an Aid Society for the purpose of creating interest in the institution.

Resolved, That the Committee on the Tuberculosis Hospital shall consist of three members with Secretary *ex officio*, of the Board, who will pledge themselves to visit the Hospital once each month and to make careful observation of conditions at this institution and embody the same in a collective or an individual written report to the Executive Committee.

That the Superintendent be empowered to employ such help as is necessary for the efficient management of the Tuberculosis Sanatorium. Passed.

Columbia, S. C., September 10, 1920.

The regular meeting of the Executive Committee of the State Board of Health was held September 10, 1920, at 9:30 a. m., in the office of the Secretary, with the following members present: Dr. Robert Wilson, Jr., Chairman, Dr. R. A. Marsh, Dr. C. C. Gambrell, Dr. E. A. Hines, Dr. William Eggleston, Dr. W. W. Dodson, Dr. W. M. Lester and the Secretary.

The minutes of the previous meeting were read and approved.

Reports from the divisions of Rural Sanitation, Laboratory, Child Hygiene and Tuberculosis were read and received as information.

Reports were also read from the Committee on the Tuberculosis Sanatorium, with the following recommendations, and the State Health Officer was directed to see that these recommendations were carried out as far as possible:

1. The erection of a large water tank for fire protection together with the necessary hydrants, hose, etc.
2. The immediate renovating of all screen doors to the buildings and the building of double screen doors to all entrances.
3. The immediate provision for an incinerator.
4. The employment of more nurses or maids or both.
5. The employment of additional medical assistance, even at the cost of borrowing money against the meeting of the Legislature.
6. Provision of a holiday for the present superintendent, by the employment of a temporary assistant if necessary.
7. Immediate repainting of all buildings.

The following regulations were presented by a committee consisting of James A. Hayne, State Health Officer, and Morris C. Lumpkin, Assistant Attorney-General, a representative from Charles R. Allen being present and making a strong plea for the rescinding or modification of the present laws in regard to the sale of evaporated or condensed skimmed milk.

1. The sale of condensed, powdered or evaporated skimmed milk is allowed, but it shall be unlawful to sell the said condensed or evaporated skimmed milk except under the following regulations: in addition to compliance with all existing laws the said condensed, powdered or evaporated skimmed milk to be sold in packages or containers containing not less than one gallon, which packages or containers shall be hermetically sealed at the time of

the sale; also that at the stores, groceries, shops, or places where such condensed or evaporated skimmed milk is sold a sign printed or painted in black letters on white background and on which the letters are at least five inches high and worded as follows, must be displayed: "Condensed, powdered or evaporated skimmed milk should not be fed to babies, children, or invalids—it is lacking in food value."

2. Powdered skimmed milk sold in South Carolina shall bear a label stating that it has not the value of a whole milk as a food and also a label as follows, "After opening this package this milk deteriorates very rapidly and should be used as soon as possible."

The Board decided to hold a special meeting at the call of the Chairman, and directed the Secretary to obtain all data possible bearing upon the subject of the sale of condensed or evaporated skimmed milk.

A letter was read from Mrs. Ruth A. Dodd, requesting that she be allowed to assist Dr. Isadore Schayer of the University of South Carolina, and deliver a course of twenty-four lectures on child hygiene. This request was granted by the board.

A letter was read from the Greenville County Medical Society, Dr. T. M. Davis, Secretary, requesting that potent vaccine virus be supplied to the Local Board of Health and that this vaccine be shipped on ice to the city. The Board agreed with the Secretary in his letter to them that such shipment would be impracticable on account of the Legislature not having made sufficient appropriation for same, and also agreed that his letter in which he stated that the vaccine supplied was potent when it left his office.

There being no further business the Board adjourned to meet at the call of the chairman.

JAMES A. HAYNE, M. D.,
Secretary.

Columbia, S. C., October 7, 1920.

At a special meeting of the Executive Committee of the State Board of Health held in the office of the Secretary, October 7, 1920, the following members were present: Dr. Robert Wilson, Jr., Chairman, Dr. E. A. Hines, Dr. W. M. Lester, Dr. C. C. Gambrell, Dr. William Egleston, Dr. W. W. Dodson and the

Secretary. Mr. J. D. Miot, of Columbia, and Mr. H. N. Spencer, representing Charles R. Allen Co., of Charleston, were also in attendance. The meeting was called for the purpose of a hearing in regard to the sale of condensed, powdered or evaporated skimmed milk in the State of South Carolina.

The minutes of the previous meeting were read and approved.

After a thorough and full discussion of the former regulation in regard to the sale of condensed, powdered or evaporated skimmed milk, on motion of Dr. Egleston, seconded by Dr. Gambrell, the following regulation was introduced and adopted:

"The sale of condensed, powdered or evaporated skimmed milk is allowed, but it shall be unlawful to sell the said condensed, powdered or evaporated or skimmed milk except under the following regulations: In addition to compliance with all existing laws the said condensed, powdered or evaporated skimmed milk to be sold in packages or containers containing not less than one gallon, ten pounds, which packages or containers shall be hermetically sealed at the time of sale; also, that at the stores, groceries, shops, or places where such condensed, powdered or evaporated skimmed milk is sold a sign printed or painted in black letters on white background and on which the letters are at least five inches high and worded as follows, must be displayed, "Condensed, powdered or evaporated skimmed milk should not be fed to babies, children, or invalids—it is lacking in food value."

The next business before the meeting was the reading of the resignation of Dr. W. J. Burdell, of Lugoff. The Board accepted his resignation with regret, and directed the Secretary to write Dr. Burdell, expressing the regret of the Board at his resignation and extending the best wishes of the Board for his success in his new field of activities.

Dr. M. J. Walker, of York, was nominated to take the place of Dr. Burdell and was unanimously elected. The Secretary was directed to notify him of his election and also to notify the Governor in order that he might issue a commission to Dr. Walker.

The Secretary was authorized to approve the budgets as presented by the various departments of the State Board of Health, after careful examination as to the merits of the suggested budgets.

A resolution was introduced and passed that the Secretary write a letter to the various heads of departments, directing them not to endeavor to influence legislation without a written request

from the Secretary, and making disobedience of or noncompliance with this letter a cause for dismissal.

A request from the South Carolina Medical Association that the Executive Committee of the State Board of Health inspect all hospitals in South Carolina, both private and public, as to their sanitary conditions, was agreed to, and the Executive Committee directed the Secretary to take steps to see that such inspection be made as soon as possible.

There being no further business, the meeting adjourned to meet at the call of the chairman.

JAMES A. HAYNE, M. D.,
Secretary.

Columbia, S. C., December 8, 1920.

The regular quarterly meeting of the Executive Committee of the State Board of Health was held in the office of the Secretary at 10 o'clock in the forenoon, December 8, 1920, with the following members present: Dr. Robert Wilson, Jr., Chairman, Dr. Wilson Egleston, Dr. Robert A. Marsh, Dr. C. C. Gambrell, Dr. E. A. Hines, Dr. W. M. Lester, Dr. M. J. Walker, and the secretary. The Committee was advised that Dr. R. K. Otis, pharmaceutical member, was desperately ill at his home with pneumonia.

The minutes of the previous meeting were read and approved.

The business before the Committee was the reading of the annual reports of the following divisions: Venereal Disease, Bureau of Child Hygiene, Tuberculosis Sanatorium, Rural Sanitation, Laboratory, Vital Statistics, Malaria Control Work, and Hotel Inspection, which reports were received as information and ordered printed in the annual report.

A regulation was introduced by Dr. Hines and seconded and passed by the Board, thanking each and every one of those connected with the work of the Board for their loyal services during the past year and congratulating them upon the growth of their their several departments, and expressing to them the thanks of the Board for faithful work well done.

A letter was read from Charles R. Allen of Charleston requesting a further extension of time for disposing of their stock of condensed, powdered or evaporated skimmed milk and it was agreed to extend the time thirty (30) days from January 7th,

1921. A representative from the Merrill-Soule Corporation appeared and asked that the question of the sale of powdered milk be reopened.

The Board decided that it would hold its next meeting at the call of the chairman in January, during the session of the Legislature, when these matters would be fully discussed and finally passed upon.

Report of the Committee on its visit to the Sanatorium was read and a committee, consisting of Dr. Lester and the State Health Officer, was appointed to confer with Mrs. Rembert in regard to the findings of the Committee.

The following letter, pursuant to a resolution passed at the October meeting, was sent out to the various heads of departments:

October 11, 1920.

To Heads of Divisions, Bureaus and Sections, and Other Employees, South Carolina State Board of Health:

The Executive Committee of the South Carolina State Board of Health, at a meeting on October 7, 1920, considered the question of measures to be undertaken in securing funds for the State Board of Health for the State fiscal year 1921.

With special reference to funds to be appropriated by the General Assembly, and for the guidance of heads of departments and other employees of the State Board of Health, a resolution was adopted prohibiting lobbying or solicitation of financial support for the various divisions by their respective heads except upon written request from the Executive Secretary, the State Health Officer.

No exception to this ruling will be made and evidence of violation will be considered as sufficient grounds for dismissal.

The State Health Officer expects to avail himself of the advice and assistance of all heads of departments. As required, each employee will be called upon to furnish informative data direct to members of the General Assembly or to Committees of that body.

By direction of the Executive Committee of the South Carolina State Board of Health.

Respectfully,

JAMES A. HAYNE,
Secretary and State Health Officer.

Per C. V. AKIN,
Assistant State Health Officer.

Copies to:

Division of Venereal Disease Control.

Hygienic Laboratory.

Bureau of Vital Statistics.

Bureau of Child Hygiene.

South Carolina and Palmetto Sanatoriums.

Cooperative Malaria Control.

Bureau of Rural Sanitation.

Hotel Inspection.

Sanitary Engineering.

There being no further business, the meeting adjourned to meet at the call of the chairman.

REPORT OF COMMITTEE ON SANITARY INSPECTION OF STATE PENAL AND CHARITABLE INSTITUTIONS.

Committee: C. C. Gambrell, M. D., Chairman; Wh. Eggleston, M. D.; W. M. Lester, M. D.

Your Committee on Penal and Charitable Institutions begs to submit the following report:

On October 18, 1920, we visited the Reformatory for Negro Boys in Lexington and found a very few changes made since our last inspection. The kitchen was clean, and they had a new oven and new electric lights. The ceiling, however, was very bad. The screens were much better than they were last year. Two large heaters had been placed in one of the rooms where the boys sleep. The other room was heated by open fireplaces, as it has been all along. The health of the inmates for the past year has been fairly good. A shoe shop and carpenter shop have been finished but as yet no machinery had been installed. In this institution there are 139 boys. Their sleeping quarters are very much crowded, sometimes two boys being compelled to sleep in one narrow bed. We again urge the advisability of another building to use as a mess hall, which would enable the present mess hall to be used for sleeping quarters, thereby relieving the

crowded condition which exists at present. We also would urge the advisability of making better heating facilities on account of the danger of fire from the present method of heating.

INDUSTRIAL SCHOOL FOR WHITE GIRLS.

On October 18th, we also visited the Industrial School for White Girls. At present there are twenty-two inmates, ranging from eleven years (the youngest) to eighteen years (the oldest) of age. They have a good school and have a clinic twice a week. The girls do all their own work, including gardening, making their own clothes, keeping the building clean, their own milking and looking after the milk, tending to the cows, the chickens, pigs and geese. They have sufficient sleeping space in this building and we found the building, including the kitchen and dining room and all apartments, spotlessly clean and in a nice condition. They have also started, in a small way, a library. At present they have no suitable milk room. We would urge the erection of a suitable building for a milk room for the proper handling of the milk. Also, a suitable barn is badly needed.

CONFEDERATE HOME.

On October 19th we visited the Confederate Soldiers' Home. In this place there are at present 64 inmates, 11 of whom are in the hospital. They have one male and one female nurse for day duty and one male nurse for night. The building is very much in need of repairs. Plastering is falling down from overhead and in various places, and the heating arrangements are very inefficient. They have only one woman to clean up the main part of the house; we would advise the employment of at least one other. They have only one cook at present, but have a white girl to help in the dining room. Considering the age of those old Confederate soldiers, the health of the past year has been comparatively good.

W. EDGERTON,
C. C. GAMBRELL.

Your Committee visited the State Hospital on October 20, 1920. On the date of our visit there were 2,195 patients under the care of the hospital, exclusive of those out on parole. Of this number 661 were white women, 543 white men, 447 colored women, and 544 colored men.

All of the patients except 104 colored men and 369 colored women, who are cared for at State Park, are housed and treated at the hospital in Columbia.

Your Committee found the wards and buildings for white patients in most excellent condition. With the exception of the male patients, all quarters for the white patients have been remodeled and brought up to modern standards within the past five years.

The Taylor Building is now being reconstructed and will be ready for occupancy about January 1st, or soon thereafter. When this building is completed all white patients will have been provided with new quarters, which are clean, sanitary, and beautifully kept. The State has every right to be proud of the provision it has made for these unfortunates, many of whom; your Committee finds, appreciate fully what has been done for them, and who are showing their appreciation by aiding the officers and employees to keep the hospital clean and up to the highest standard of health.

The kitchens and dining rooms were found in splendid condition and well kept.

The food, while plain, is of good quality and of sufficient quantity, and is well prepared.

The cold storage plant and the ice cream machine were found efficient and in order.

The hospital dairy was found to be up to its usual standard and is a model in all of its appointments.

The quarters for colored patients are not very good. Your Committee was informed by the Superintendent that with the exception of new plumbing and a change in the heating arrangement, but little work had been done on the quarters for the colored people. We understand that it is the desire of the Board of Regents to remove all the colored patients to State Park, and that funds to make provision for them will be requested of the next General Assembly. Your Committee is in hearty accord with this idea and would strongly urge that provision be made for them as early as possible. The quarters of the colored patients are not only in poor physical condition, but they are much overcrowded. The Board of Regents and the Superintendent of the Hospital are not to be criticised for this, for they have had a tremendous undertaking in remodeling the hospital for the white

patients and have gone forward as rapidly as the appropriations would permit, but now that these quarters have been completed, it is urged that work on the wards for colored patients be not delayed.

The death rate at the hospital for the year has been almost what it was last year, viz.; 8.6 per cent. This is a remarkably low death rate when the class of patients committed is taken into consideration. Many senile patients are admitted, quite a number of them being over 70 years of age. It is to be regretted that suitable provision has not been made in each county for these old people.

Shortage of Nurses. There is a shortage of nurses, but one must remember that there is a shortage everywhere on account of war conditions. Relief is believed to be in sight.

W. EGLESTON,

C. C. GAMBRELL.

Sanitary Inspection of the State Penitentiary, Columbia, S. C.

Your Committee has very little to add to its report of last year, and the last several years. Again we would urge most strongly the improvement of the women's building. The fact that this building is in a most insanitary condition, and the fact that it is a veritable fire-trap, has been reported by this Committee for several years past. We would most strongly urge that these conditions be remedied, and also that some provision be made for hospital treatment for women prisoners.

The sanitary condition of the general hospital is far from ideal and there is no accommodation at present for operations in this building.

The prison physician, Dr. Jennings, informs the Committee that there is no tuberculosis existing in the penitentiary at present, and he suggests that the Griffith building, which was built for a tuberculosis hospital, be converted into a general hospital, and equipped with a suitable operating room. This building is steam heated and with some alterations can be rendered much more suitable for a general hospital than the present old building which is now used for a general hospital. This suggestion strikes the Committee as being a very good one because should any tuberculosis be brought into the penitentiary, such a case could be isolated and cared for in other places at the plant.

We would also recommend that a dentist be engaged for the prisoners in the penitentiary. At present any who need dental work have to pay for it themselves and many of them have no way of doing this.

We would recommend that the cows for the institution be tested for tuberculosis twice a year.

We hope that the present General Assembly will take these matters under consideration for they have been urged for some years and are most badly needed.

C. C. GAMBRELL,
Chairman.

WM. EGGLESTON, M. D.,

W. M. LESTER, M. D.

December 19, 1920.

Your Committee inspected the South Carolina Industrial Institute at Florence on this date.

The general conditions at this place are much better than a year ago and those in charge seem to have an earnest desire to make the institution a high grade one from every angle.

The fare is fairly well balanced though there is room for improvement in this line and an effort is being made to make it more liberal.

A portion of an old barracks has been made into a fairly serviceable infirmary and the health of the boys and girls has been uniformly good, the mortality rate quite low. There is pressing need for an infirmary building, however, into which all cases of sickness can be isolated from other quarters, and our most urgent recommendation is that the plans for the infirmary which have been adopted be carried out and this building completed at once.

The buildings are uniformly clean and sanitary, indeed, exceedingly so for the type of architecture of most of them. The toilets in the new building used as quarters for the boys should be changed to the type used in the other buildings. The present type flushes too slowly and gives to long continued odor and possibility of fly contamination.

The dairy arrangements are excellent, and with the exception of an ill fitting screen door at the milk room and an open screen door at the manure heap, it is quite a credit to the institution.

We urge again that the large water tank be used for fire protection by being connected up with a system of hydrants, and the installment of a fire apparatus and the organization of a fire company. The preservation of the large investment on the one hand and the safety of the inmates on the other seem to make this a matter of duty.

It is suggested that the per capita ventilation of the sleeping quarters be investigated. It is doubtful if the necessary number of cubic feet of air for each person is provided in some of them.

(Signed)

WM. EGGLESTON.

REPORT OF COMMITTEE ON SANITARY INSPECTION OF STATE SCHOOLS AND COLLEGES.

Committee: E. A. Hines, M. D., Chairman; R. A. Marsh, M. D.
*Mr. Chairman and Members of the Executive Committee State
Board of Health.*

Gentlemen: I beg to report that I visited the Citadel and the State Medical College on October 27th, and made our annual sanitary inspection of both institutions. I am glad to report that I found no sickness among the 300 cadets, and Major Tiller informed me that there had not been any epidemics or any sickness whatsoever among the men this year.

I found in the dining room and the kitchen a great many flies, and in the store room a large number of cockroaches. I urged those in charge to keep out the flies and keep the roaches from the foodstuff.

The infirmary is well equipped and is kept beautiful and clean. The toilets about which we had so much to complain of last year are greatly improved, some provision having been made to increase the water pressure, so that now the flushing is perfect.

The barracks dormitories were as clean and neat as we could expect to find in a building so ancient.

Our State Medical College is a credit to our profession. In this institution I found everything from the "Sanctum Sanctorum" down even to the vat in the very best and healthful condition. Class rooms, halls, laboratories, toilets and dissecting room are all absolutely kept in perfect order. Not a cigar or a cigarette stump or amber stains did I find. Hygiene and sanitation is not only taught in this institution, it is also practiced. There

has been no sickness among the student body this session. On account of the large number of students the building has been somewhat insufficient, but this condition will be relieved when the physiologic and pharmaceutical departments are moved into the handsome new quarters which are now near completion.

The roof of the new building is arranged so as to provide sanitary quarters for all the animals that are kept for experimental purposes.

Respectfully submitted,

ROBT. A. MARSH,

Member Committee Inspection Schools and Colleges.

Sanitary Inspection of Winthrop College November 23, 1920.

A number of improvements from a sanitary standpoint have been inaugurated at Winthrop College since our last visit, 1919, the most notable being the completion of a new and modern dairy barn; also the remodeling of the abattoir, the latter having been changed from a wooden to a combination wood and concrete structure.

The management of the Dairy deserves especial commendation for the scientific care of the milk and milk products.

The health of the student body has been excellent so far this session, there being only three patients in the infirmary at the time of our visit, all suffering from minor ailments.

A study of the food supply of Winthrop College discloses the fact that the authorities have given this matter very careful attention, the food being substantial and wholesome.

The rapid construction of the new dormitories will shortly remove all danger of unnecessary overcrowding. We wish to call especial attention to the splendid sanitary arrangement of this new dormitory.

The spirit of athletics at Winthrop College is conducive to the good health of the student body. The authorities endeavor to give physical training to all of the pupils, rather than to a few interested in professional athletics. At the time of our visit there were more than one thousand students in the institution.

Our Committee heartily approves of the proposed school at Winthrop College for the training of Public Health Nurses in connection with a health unit in York County. The splendid

equipment of Winthrop College should meet every requirement for this greatly needed service to the people of South Carolina.

Respectfully submitted,

E. A. HINES, M. D.

Chairman, Committee Sanitary Inspection Schools and Colleges.

Sanitary Inspection of Clemson College.

Clemson College was visited December 6th. Considerable improvement was noted in the mess hall within the past year; as was recommended by our Committee, the mess hall has had a tile floor put down and the wood work and walls of both the mess hall and kitchen repainted.

An investigation of the food discloses the fact that this is now satisfactory. The price of board has been increased to twenty dollars per month; this increase enables the college to supply better table food. Milk and milk products have been given the cadets in gradually increasing quantities in recent years. The mess hall is now in charge of an expert who has had considerable experience in the army.

The Hospital had only two or three patients suffering from minor ailments at the time of our visit. Dr. George D. Heath is now the surgeon in charge. Dr. Heath has had a wide experience as a military surgeon. The hospital has, for the first time, a trained nurse, giving all of her time to the institution. Also there is a trained hospital orderly. We noted that a splendid hot water heating water plant has been installed. Other improvements in the hospital are under way, such as repainting, etc. New equipment, including operating room supplies, has been ordered, the estimated cost of all these improvements being approximately five thousand dollars. The college has forty-five thousand dollars in the sinking fund towards a new hospital plant.

The health of the student body has been very good.

The number of students enrolled at the present time is seven hundred and sixty-two; practically a normal enrollment.

The general health and the general sanitation of the institution deserve the recommendation of our committee.

Respectfully submitted,

E. A. HINES, M. D.,

Committee, Inspection of State Colleges.

Mr. Chairman and Members of the State Board of Health.

Gentlemen: I visited the University of South Carolina and the State College at Orangeburg on October 28th, and made an inspection of both institutions.

At the University I am glad to report that I found no sickness and found things generally in a good sanitary condition, though I think I can offer a suggestion or two that might improve the conditions somewhat. I find that there are no screen doors or windows to either the class rooms or dormitories. This, I think, should not be.

I think, too, that there should be a laundry plant on the premises, and that the professors and student body should have the benefit at actual cost of operating the plant. It is my opinion that many diseases are brought into our institutions by the so-called laundresses bringing the clothes from homes in which there is disease and filth of all kinds, and most always this is the means by which vermin and bedbugs are gotten into the schools. The latter abound now in the University.

The toilets are nicely kept, and they are clean.

Mrs. Madden made complaint of many mosquitoes at the infirmary. She thinks that certain underground drainage would relieve this condition.

The kitchen floor is so badly worn that it is not possible to keep it clean and in a sanitary condition. The walls of the kitchen and matron's rooms are smoked and very dirty and should have something done to them.

Mr. Hall, the Marshal, called my attention to the fact that the water on the campus was not circulating water; in other words, it is stagnant. This condition can very easily be remedied and with very little expense, and I think it should be done and thereby give the boys better water.

At the State College I was accompanied through the premises by Dr. Wilkinson, who seems to take great pride in his work and in the institution. Since our last report of a year ago the new building has been completed and is used as class rooms and auditorium. The latter is equal in beauty and equipment to any school auditorium in the State.

SUGGESTIONS.

1. Need of annual appropriation for upkeep and extension of hospital and other sanitary facilities of the college.
2. Need of appropriation for laundry improvement.
3. Need of funds for gradual improvement of kitchen facilities. For example, steam cookers, baking ovens, hot water appliances, etc.
4. Need of an artesian well for constant water supply. Very often during winter the city water system runs short, and for a whole day at times, we are without this important need for sanitary and domestic purposes.

I find that since the completion of the new building that the girls' dormitory is no longer in the very crowded condition that we reported to you a year ago. The removal of the class rooms from this building gives them ample space and sanitation can be observed. This however, is not the case with the boys' dormitory. I find in it many rooms in which six boys stay in a single room, and of course we know that where there is such a crowded condition as exists here that it is hardly possible to have the very best sanitary rules observed, and for this reason we would suggest that some steps be taken for its relief, which can be done by the erection of an administrative building, with apartments for teachers. In the boys' building at the present time five of the rooms are occupied or used for administrative purposes, three by teachers and one as a guest room.

I am again glad to report no sickness in the college. The hospital is near completion.

I went closely into every department of the institution and I can find no criticism to offer as to the sanitation found, except as is mentioned above in connection with the boys' dormitory.

Dr. Wilkinson made complaint to me of the surface closets of the Claflin College, which property, as you know, joins the property of the State College. He tells me that they are not connected with the city sewer, that they are not screened, and that no sanitary precautions are observed in connection with them. I think that this condition jeopardizes the health of the students of the State College and for its relief, if it is proper for us to do so, I would suggest that our Board take the matter up with the City Board of Health of Orangeburg, and see if we can get relief from the existing condition.

I asked Dr. Wilkinson if he would like to offer any suggestion that might better the sanitary conditions of the plant, and I herewith attach same, and beg to make it a part of my report.

Respectfully submitted,

ROBT. A. MARSH, M. D.,

Committee Inspection Schools and Colleges.

Sanitary Inspection South Carolina Institute for Deaf and Blind.

This institution was visited December 7th. No important changes have been made in the physical plant the past year. The general health of the students has been most excellent. We wish specially to commend authorities for inaugurating the medical inspection of the children, as was recommended by our Committee in a previous report. Arrangements have been made also to provide dental care January 1, 1921. All of this work is under the supervision of Dr. D. L. Smith, a specialist in diseases of children.

Plans are under way for the building of an Infirmary in the event that certain funds provided in a bequest become available at an early date.

A central dining room and kitchen is the most pressing need of the Institute.

E. A. HINES, M. D.,

Committee Sanitary Inspection Schools and Colleges.

HYGIENIC LABORATORY REPORT.

To the Chairman and Member of the Executive Committee, South Carolina State Board of Health.

Gentlemen: The Laboratory is now in its twelfth year, having been opened July the 1st, 1909. During the past year the usual growth in the amount of work has continued. No new activities were undertaken during the year. Among the noteworthy extensions of the work, as originally begun, might be mentioned the following:

1. Routine testing for paratyphoid fever, as well as for typhoid, all specimens for Widal test being tried against both organisms.
2. Free distribution of antityphoid vaccine since 1911, South Carolina being one of the first, if not the first State to adopt this routine.

3. The performance of the Wassermann test for all citizens of the State. Here again our State was among the pioneers.

4. An improvement in the old Pasteur treatment, by which the expense for rabbits and material was tremendously decreased and which also resulted in a lowered death rate as compared with the old method.

There has been no change in the personnel of the laboratory during the past year.

DIAGNOSTIC PROCEDURES.

Under this department, the Wassermann test is by far the greater part of the work requiring the entire time of Dr. Smith and a very large amount of copying, mailing, and recording of the information obtained. Over seventeen thousand Wassermans were made during the year, an increase of about two thousand over last year. As the bulk of this work is performed for the venereal disease clinics, it is suggested and asked that your body attempt some scheme of participation between the Board and the Public Health Service so that a branch laboratory for the performance of these tests might be established at some central point to handle the work of the group of clinics—Union, Spartanburg, Greenville and Anderson. It is hardly necessary to point out how highly desirable such arrangement would be for all concerned.

About the usual number of other tests were made, running the grand total up to 30,251 for the year.

For the past five months a card record of specimens sent in has been kept in the name of each physician sending work to the laboratory. Reference to this shows that during that period over seven hundred physicians have called on the laboratory for assistance in diagnosing.

PASTEUR DEPARTMENT.

This has been a rabies year. Over six hundred persons have received preventive treatment. Two deaths have occurred among these, occurring, however, before the expiration of the time required for immunization to be fully established. They cannot, therefore, be considered as failures of the treatment. In addition to these, the newspapers have mentioned at least one authentic death in an untreated person. It is possible that one or more cases have happened in the State, but at time of this writing, verification has not been successful. There have been several cases

reported from other parts of the United States and the steady spread of the disease is causing growing uneasiness, notably, in Georgia and Pennsylvania.

As a matter of permanent record and for general information concerning the Laboratory, the attached statement prepared for the Budget Committee is made a part of this report. It is self-explanatory. Also attached is a classified and tabulated statement of the work done during the past eleven months.

Respectfully submitted,

F. A. COWARD, M. D.,

In Charge, Department of Laboratory.

HYGIENIC LABORATORY.

A diagnostic laboratory is now recognized as an indispensable adjunct to every State Department of Health, and even, where possible, to every municipal health organization. The laboratory of the South Carolina State Board of Health was opened July 1, 1909. The response on the part of physicians and citizens was immediate and the demands on the laboratory have increased steadily year by year.

FUNCTIONS.

The functions of the laboratory may be grouped under three heads:

1. Verifying by accurate scientific tests the clinical diagnoses of communicable diseases.
2. Determining by standardized methods and tests the proper period for quarantine of persons with communicable diseases, and the time when such persons are no longer a menace to the public and may be considered free to mingle with other people.
3. The preparation and distribution of certain biological products proved to be of value in immunizing well people against infection.

The diagnostic work of this laboratory, as will be seen by reference to the attached summary for the first eleven months of 1920, is directed principally against the following diseases: Tuberculosis, Hookworm, Rabies, Diphtheria, Malaria, the Enteric Fevers, and Venereal disease. Under this head must also be classed the testing of private and public water supplies to determine freedom from contamination from intestinal discharge. Under the second head might be placed also the work on Tuber-

culosis, Hookworm, Venereal disease, and Typhoid fever. Under the third head, the laboratory prepares a modification of the old Pasteur treatment for the prevention of rabies. Persons bitten by rabid animals are treated either at the laboratory or at home by their physicians. In the latter case vaccine is mailed out daily in hermetically sealed containers. Typhoid and paratyphoid vaccine are distributed through the laboratory and the records of same kept there. These vaccines are not at present prepared in the laboratory but are purchased from reliable manufacturers for reasons of economy and lack of sufficient space and help in our present quarters.

PERSONNEL.

The personnel of the laboratory is as follows: Dr. F. A. Coward, Assistant to State Health Officer, in charge, Department of Laboratory; Mr. James R. Cain, bacteriologist; Dr. H. M. Smith, laboratory assistant, and Miss M. C. Davis, stenographer. A scrub woman is employed on wages. This is the minimum which may be considered adequate to continue the present activities of the laboratory. A reference to the attached summary of tests will readily explain why the entire time of Dr. Smith is occupied with one test alone; namely, the Wassermann test. In 1919, he performed over 15,000 of these tests. The total figure for 1920 will equal or exceed this. In this connection it should be noted that a large part of this work is called for by the nine free venereal disease clinics now being operated in the State. Without our help these clinics could not function, but the laboratory receives no pecuniary benefit from the clinics whatever.

EXPENSE.

The total expense to the State for operating the laboratory in 1920, was \$10,870. Total requested for 1921, \$11,650. The total expense to the State for each examination in 1921 would be approximately 38 cents; if made at current fees of commercial laboratories this figure would range from one to five dollars, according to nature of test, which with Pasteur treatment at \$25. gives an approximation for the total number of tests and Pasteur treatments of over \$110,000, approximately ten times the amount requested.

INCREASE.

No increase is requested for 1921 except a small increase in two salaries which we believe justified and necessary.

SUMMARY OF LABORATORY WORK FOR THE YEAR 1920.

Kind of Specimen for Examination.	Positive.	Negative.	Doubtful.	Total.
Sputa for B. Tuberculosis	218	711	..	929
Hookworm Ova	601	2,546	..	3,147
Rabies	223	135	40	398
Gonococcus	486	896	1	1,383
B. Diphtheria	71	313	..	384
B. coli in water	209	108	..	317
B. Coli in urine .....	..	2	..	2
Plasmodium Malariae	17	441	..	458
B. Tuberculosis in Discharges other than Sputa .....	..	9	..	9
Blood Cultures	1	5	..	6
Miscellaneous Pathogenic Organisms:				
Pyogenic Cocci	4	..	..	4
Pneumococcus	1	2	..	3
Meningococcus .....	..	8	..	8
Miscellaneous parasites other than Hookworm:				
Ameba Hystolitica .....	..	5	..	5
Ascaris L.	13	..	..	13
Tenia Nana	68	..	..	68
Larva of House Fly	1	..	..	1
Widal Test:				
B. typhosus	1,046	1,810	53	2,209
B. paratyphoid	76	2,825	8	2,909
Miscellaneous specimens for identification:				
Microsporon furfur	2	..	..	2
Smear for Treponema pallidum .....	..	1	..	1
Total	3,039	9,817	102	12,956

WASSERMANN TEST.

Blood:	
Very Strongly Positive (xxxx)	3,935
Strong Positive (xxx)	415
Positive (xx)	263
Weakly Positive (x)	509
Doubtful (x—)	497
Negative (—)	11,101
Anticomplementary (AC)	498
Total	17,218

Spinal Fluid:	
Very Strongly Positive (xxxx)	33
Strongly Positive (xxx)	4
Positive (xx)	0
Weakly Positive (x)	0
Doubtful (x—)	2
Negative (—)	67
Anticomplementary (AC)	1
Total	77

Total for Wassermann Test

Specimens received unfit for examination

PASTEUR TREATMENTS.

Number of patients finished treatment December 31, 1920	633
Number of patients under treatment December 31, 1920	37

LOCATION OF BITES.

Face	20
Hand and Foot	94
Leg and Arm	81
Doubtful Exposure	19
No Information	454
Body	2

WHERE TREATED.

Treated at Home	648
Treated at Laboratory	22

TYPHOID VACCINE.

Number of Ampules sent out	32,160
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December 7, 1920.

The State Health Officer, S. C., State Board of Health, 512 Palmetto Building, Columbia, S. C.

Sir: I have the honor to submit herewith a preliminary annual report of the activities of the Division of Venereal Disease Control of the South Carolina State Board of Health.

A more comprehensive report, analytical in nature, is in course of preparation, which will be submitted to you in the near future.

The present report contains the same total figures which will appear in the final record but it will be impossible to submit separate sections for each clinic until additional data have been secured.

Respectfully,

C. V. AKIN,

P. A. Surgeon, State V. D. Officer.

REPORT OF ACTIVITIES OF THE SOUTH CAROLINA DIVISION OF VENEREAL DISEASE CONTROL FOR THE STATE FISCAL YEAR, 1920.

Since January, 1920, demands upon the State Division of Venereal Disease Control have gone far beyond any estimates made prior to that date. In meeting these demands it has been the privilege of the division to perform a service to the State full of social and economic significance.

Since the institution of a State program of venereal disease control in the latter part of 1918 a fixed policy of attack has been followed. Recognizing the menace to all classes of society represented in the existing prevalence of these infections our campaign has been one of control rather than of prophylaxis. To prevent disease is manifestly the function of the modern public health official but when epidemics occur prevention may only be arrived at through control of the foci of infection. While the term "epidemic" may not, with propriety, be used in connection with the venereal diseases they are so extensively endemic as to require prompt and energetic measures for their control. So much in justification of our policy of control through treatment of venereally infected persons.

At the beginning of the year 1920 there were in South Carolina eight major clinics wherein venereally diseased persons might secure expert examination and treatment at public expense. Located with special reference to concentration of population in

Anderson, Charleston, Columbia, Florence, Greenville, Newberry, Orangeburg and Spartanburg, these clinics brought treatment within easy reach of hundreds of persons, not only in these progressive communities but in the adjacent rural districts.

Careful estimates having been made of the expected needs of the clinics and plans having been drawn up for additional units and a general expansion of the work, a budget was submitted to the General Assembly calling for over \$30,000.00. In spite of the fact that this sum represented three times the amount set aside during 1919 the State Legislature granted appropriations totalling \$33,886.00.

In addition to this sum the various cities and counties in which clinics were located gave in money or its equivalent in clinic quarters, personnel, etc., sufficient to increase the resources of the division to over \$60,000.00. Through the Chamberlain-Kahn Fund the Federal Government gave something over \$7,000.00 during the first six months of the year.

Early in 1920 it became apparent that estimates of the needs of all clinics were in error. A constant increase in the number of persons attending for treatment was noted and demands for medical supplies surpassed all previous records. This increase has continued throughout the entire year, the anti-syphilitic remedies alone being double the cost of last year's supply.

As these clinics are operated for public benefit no attempt has been made to modify either the attendance or the amount of treatment furnished the individual. We have felt obligated to admit all who would attend and to provide each with the full amount of treatment indicated. The result of this has been a rearrangement of our plans for increasing the number of clinics in the State. Perhaps no real loss has been experienced as clinic patients have been drawn from thirty counties, each clinic making its influence felt in every direction.

Each clinic has been made a center for the dissemination of information concerning venereal diseases. Illustrated educational posters are shown and instructive leaflets and bulletins are distributed. Each patient is carefully instructed in hygienic principles with the result that new cases are constantly brought in by patients still under treatment. When a clinic has been brought to the point where it "feeds" itself its success is assured.

Many changes in personnel have occurred during the year. In two clinics it has been necessary to change the entire personnel.

A special effort has been made to keep these units non-political but as the absolute cooperation of city and county authorities is essential to success, friction is eliminated in whatever manner seems most expeditious. Several transfers have been effected with happy results. Physicians, nurses, and attendants have added to clinic staffs as the work became too heavy for those already employed.

Only one new clinic has been aided. On August 2, 1920, the Union Clinic was officially opened. From the start this clinic had the support of the city and County of Union and of the business and industrial enterprises of that community. With such universal local backing this clinic will naturally succeed.

A special, though necessarily restricted, educational campaign has been undertaken to supplement the work of the clinics. The need for venereal disease education is much greater than for legislation. Legal repressive measures may serve to restrain by force of prostitutes and other vicious members of society who ignorantly or otherwise spread venereal diseases but by no process of law may we hope to generally influence the morbidity and mortality rate of these diseases.

Our ultimate hope of salvation unquestionably lies in education. As medical men we are interested in venereal diseases as communicable infections responsible for alarming numbers of disabilities and deaths. From our point of view the moral issues at stake are chiefly significant in connection with the epidemiology of these diseases. As physicians and public health men we cannot hope to accomplish more in moral education than the churches and other agencies specializing in that phase of the subject. As bacteriologists we may agree with the moralists that in continuance lies the only real prevention. As physiologists and thinking human beings we realize the futility of advocating a principle so diametrically opposed to natural law. If these premises be true, along what lines shall our efforts for education lead, and what will be the final product of our teaching? Can we do more than strive for physical fitness whether it be secured negatively by fear of disease and its consequences or positively by the use of prophylactic measures.

Until some better plan is perfected I shall request approval of our program of control through the treatment of venereally infected persons, and endorsement of its repetition during the coming year.

From January 1 to November 30, 1920, the following results were accomplished in the nine State Venereal Disease Clinics:

11,217 cases of syphilis, 9,710 cases of gonorrhoea, and 558 cases of chancroid were treated. Total 21,485 cases.

2,960 cases of syphilis, 2,704 cases of gonorrhoea, and 284 cases of chancroid were discharged from clinic treatment.

18,884 doses of salvarsan (neodiarsenol) have been administered to syphilitic cases.

12,000 doses of mercury salicylate have been injected in the treatment of syphilis.

9,810 blood tests (Wassermann) have been performed by the laboratories of this State for clinic patients. The majority of these test were performed by the Laboratory of the State Board of Health.

7,700 microscopic examinations have been made for gonorrhoea.

258 infected persons have been placed in detention under the quarantine laws of the State.

151 persons have been given operative treatment in hospitals.

In addition to the above all persons attending clinics have been given such routine internal and external treatment as was indicated for the infection from which they suffered.

Treatment is given by clinic staffs to inmates of city and county jails, chaingangs, and State institutions in which no provision has been made for venereal disease treatments.

The General Assembly of 1921 will be requested to provide funds to continue the clinics already functioning and to institute clinics in at least two additional localities.

The attached map shows the location of the nine clinics.

BUREAU OF VITAL STATISTICS.

C. V. AKIN.

Columbia, S. C., December 7, 1920.

Dr. J. Adams Hayne, Secretary State Board of Health, Columbia.

My Dear Doctor: Herewith please find my report for ten months ending October 31, 1920. It is an improvement over last year but there is still much to be desired. Hope to do better in 1921.

Very truly yours,

C. W. MILLER,

Assistant State Registrar.

**TOTAL NUMBER OF BIRTHS AND DEATHS IN SOUTH CAROLINA
FROM JANUARY TO OCTOBER 31, 1919.**

Counties.	Deaths.	Births.	S. Births.
Abbeville	291	618	33
Aiken	457	729	62
Allendale	122	294	21
Anderson	652	1,498	54
Bamberg	240	477	28
Barnwell	200	313	38
Beaufort	405	419	49
Berkeley	326	559	53
Calhoun	296	493	39
Charleston	1,638	1,686	248
Cherokee	297	720	40
Chester	276	506	31
Chesterfield	302	787	27
Clarendon	426	807	68
Colleton	188	507	34
Darlington	491	848	56
Dillon	173	493	18
Dorchester	179	246	17
Edgefield	302	452	23
Fairfield	294	510	30
Florence	649	1,163	89
Georgetown	307	485	43
Greenville	893	1,759	92
Greenwood	454	697	45
Hampton	242	501	38
Horry	397	915	53
Jasper	84	112	4
Kershaw	268	573	27
Lancaster	323	660	38
Laurens	419	816	45
Lee	302	628	48
Lexington	302	754	40
Marion	235	425	24
Marlboro	444	749	58
Newberry	334	728	33
Oconee	277	721	29
Orangeburg	730	1,602	129
Pickens	254	789	33
Richland	1,354	1,490	139
Saluda	169	343	15
Spartanburg	983	1,946	143
Sumter	569	1,002	81
Union	246	544	18
Williamsburg	457	866	53
York	548	907	57
McCormick	196	328	19
Total	18,992	34,465	2,372
Yearly rate based on deaths for ten months			14.1
Yearly rate based on births for ten months			25.4

**TOTAL NUMBER OF BIRTHS AND DEATHS IN SOUTH CAROLINA
FROM JANUARY TO OCTOBER 31, 1920.**

Counties.	Deaths.	Births.	S. Births.
Abbeville	280	620	29
Aiken	489	849	61
Allendale	155	323	32
Anderson	737	1,860	87
Bamberg	247	498	37
Barnwell	167	352	23
Beaufort	364	483	63
Berkeley	375	576	51
Calhoun	272	527	45
Charleston	1,893	1,778	248
Cherokee	300	746	24
Chester	271	642	26
Chesterfield	308	899	43
Clarendon	436	919	52
Colleton	181	477	35
Darlington	483	1,028	66
Dillon	208	513	30
Dorchester	187	283	14
Edgefield	212	500	21
Fairfield	277	573	27
Florence	776	1,306	106
Georgetown	378	461	34
Greenville	1,044	2,008	119

Greenwood	351	755	47
Hampton	283	440	37
Horry	328	965	58
Jasper	121	175	8
Kershaw	259	672	18
Lancaster	281	704	27
Laurens	458	1,017	52
Lee	268	606	42
Lexington	370	809	40
Marion	166	511	30
Marlboro	465	984	68
McCormick	151	289	25
Newberry	348	814	51
Oconee	313	775	25
Orangeburg	893	1,801	127
Pickens	242	853	31
Richland	1,373	1,680	126
Saluda	171	271	16
Spartanburg	1,009	2,111	120
Sumter	545	1,152	88
Union	215	620	20
Williamsburg	422	930	52
York	544	957	54
Total	19,616	38,112	2,436
Yearly rate based on deaths for ten months			14.
Yearly rate based on births for ten months			27.2

DEATHS FROM PELLAGRA IN THE FOLLOWING COUNTIES FROM
JANUARY 1 to OCTOBER 31, 1919 and 1920.

Counties.	Number 1919.	Number 1920.
Abbeville	2	2
Aiken	4	3
Allendale	..	2
Anderson	13	17
Bamberg	3	1
Barnwell	2	1
Beaufort	2	2
Berkeley	..	..
Calhoun	1	..
Charleston	54	30
Cherokee	2	1
Chester	6	7
Chesterfield	3	1
Clarendon	5	4
Colleton	..	1
Darlington	..	4
Dillon	3	..
Dorchester	3	3
Edgefield	7	3
Fairfield	2	5
Florence	12	5
Georgetown	2	3
Greenville	17	8
Greenwood	9	10
Hampton	2	1
Horry	..	..
Jasper	..	..
Kershaw	5	1
Lancaster	1	2
Laurens	7	4
Lee	6	1
Lexington	4	9
Marion	3	..
Marlboro	6	2
McCormick	1	4
Newberry	2	..
Oconee	2	1
Orangeburg	7	7
Pickens	4	3
Richland	52	38
Saluda	2	1
Spartanburg	17	14
Sumter	8	6
Union	3	3
Williamsburg	11	3
York	8	6
Total	303	219

BIRTHS IN SOUTH CAROLINA ACCORDING TO RACE AND SEX FOR
NINE MONTHS ENDING SEPTEMBER 30, 1919.

White.		Black.	
Male	7,746	Male	7,711
Female	7,266	Female	7,752
	<u>15,012</u>		<u>15,463</u>
Unknown		104	

BIRTHS IN SOUTH CAROLINA ACCORDING TO RACE AND SEX FOR
NINE MONTHS ENDING SEPTEMBER 30, 1920.

White.		Black.	
Male	8,374	Male	8,878
Female	7,915	Female	8,666
	<u>16,289</u>		<u>17,544</u>
Unknown		42	

DEATHS IN SOUTH CAROLINA, ACCORDING TO RACE AND AGE FOR
THE TEN MONTHS ENDING OCTOBER 31, 1919, and 1920.

Age.	White	White	Black	Black
	Male 1919	Male 1920.	Male 1919.	Male 1920.
Under 1 year	771	918	1,516	1,599
1 to 5 years	331	409	591	597
5 to 10 years	107	86	192	182
10 to 20 years	247	201	525	376
20 to 30 years	371	294	711	639
30 to 40 years	360	335	517	475
40 to 50 years	305	293	471	454
50 to 60 years	293	316	334	458
60 to 70 years	436	517	358	442
70 to 80 years	386	465	335	372
Over 80 years	130	148	209	247
Unknown	19	12	39	24
Total	<u>3,756</u>	<u>3,994</u>	<u>5,798</u>	<u>5,865</u>

Age.	White	White	Black	Black
	Female 1919.	Female 1920.	Female 1919.	Female 1920.
Under 1 year	587	676	1,258	1,363
1 to 5 years	276	348	520	516
5 to 10 years	94	78	216	192
10 to 20 years	161	165	651	528
20 to 30 years	354	354	1,033	886
30 to 40 years	372	389	778	709
40 to 50 years	245	254	509	551
50 to 60 years	240	242	382	368
60 to 70 years	352	454	337	355
70 to 80 years	344	439	262	287
Over 80 years	204	289	212	272
Unknown	18	14	30	25
Total	<u>3,247</u>	<u>3,702</u>	<u>6,188</u>	<u>6,052</u>
Indian	3			3

DEATHS FROM PARTURITION AND PREGNANCY FROM JANUARY
1 to OCTOBER 31, 1919 AND 1920.

1919.	
Attended by Physicians	272
Unattended by Physicians	48
	<u>320</u>

1920.	
Attended by Physicians	356
Unattended by Physicians	58
	<u>414</u>

**TOTAL NUMBER OF DEATHS FROM THE FOLLOWING DISEASES FROM
JANUARY TO OCTOBER 31, 1919, and 1920.**

	No. 1919.	Rate per 100,000.	No. 1920.	Rate per 100,000.
Tuberculosis Pulmonalis	1,347	99.	1,242	88.5
Tuberculosis, other forms	119	8.8	95	6.9
Pellagra	303	22.4	219	15.6
Diphtheria	61	4.5	97	6.8
Scarlet Fever	1	.07	6	.43
Measles	7	.5	13	.92
Typhoid Fever	294	21.7	262	18.7
Smallpox	3	.2	...	...
Cancer and malignant tumors	410	30.3	400	28.5
Malaria	254	18.7	215	15.3
Meningitis, Cerebro Spinal	38	2.8	30	2.2
Whooping Cough	57	4.2	122	8.7
Pneumonia	1,729	127.6	1,526	108.8
Pneumonia Broncho	893	65.9	874	62.3
Pneumonia Hypostatic	9	.7	13	.92
Pleurisy	15	1.1	14	.99
Diseases of Circulation	1,868	137.9	2,338	166.6
Diseases of Kidney	1,083	79.9	1,247	88.9
Syphilis	39	2.9	51	3.6
Syphilis, Congenital	34	2.5	51	3.6
Tetanus	13	.9	14	.99
Tetanus, Neonatorum	27	2.	26	1.8
Dysentery	103	14.2	252	17.9
Dysentery, Amebic	9	.7	5	.35
Scurvy	1	.07	...	...
Intestinal Diseases	898	66.3	1,059	75.5
Erysipelas	9	.7	15	1.04
Homicide	183	13.5	187	13.3
Suicide	47	3.5	37	2.6
Auto Accidents	49	3.6	67	4.8
R. R. Accidents	58	4.3	50	3.5
General Accidents	206	15.2	212	15.1
Lightning	24	1.6	14	.99
Legal Electrocution	4	.29	...	...
Poliomyelitis	8	.5	7	.5
Influenza and La Grippe	866	63.9	653	46.5
Encephalitis, Lethargic	17	1.2	20	1.4

**COMPARATIVE STATEMENT OF DEATHS IN THE FOLLOWING CITIES
FROM JANUARY 1, to OCTOBER 31, 1919 AND 1920.**

	1919.	1920.
Abbeville	48	64
Aiken	76	95
Anderson	167	208
Bennettsville	46	44
Camden	55	41
Charleston	1,114	1,368
Cheraw	39	43
Chester	84	96
Clinton	35	69
Columbia	1,026	1,085
Darlington	45	54
Easley	49	50
Florence	213	303
Gaffney	70	101
Georgetown	92	103
Greenville	231	288
Greenwood	100	No October Report 87
Laurens	55	69
Marion complete only to Sept. 4	41	(Incomplete) 18
Newberry	50	66
Orangeburg	63	118
Rock Hill	136	114
Spartanburg	298	306
Sumter	145	148
Union	60	66
	<u>4,337</u>	<u>5,004</u>

THE BUREAU OF CHILD HYGIENE AND PUBLIC HEALTH NURSING.

(Ruth A. Dodd, R. N., Director. Annual Report, 1920.)

THE ORGANIZATION.

1. *Administrative Department.*

The beginning of 1920 found the Bureau with an organization fairly well crystalized, with the State divided into three districts of fifteen counties each, centers established in Spartanburg, Columbia and Charleston, and employing a staff of six, as follows: a director, a secretary, three district supervisors, and one colored field nurse. One of these district supervisors was employed by the Bureau, and placed in Spartanburg in charge of District No. 1. The State Tuberculosis Association financed supervisor for District No. 2, with Columbia a center. The Southern division of the American Red Cross supplied the supervisor for District No. 3, with headquarters in Charleston. By virtue of an agreement entered into during the year 1919 between the State Board of Health, the State Tuberculosis Association, and the South division of the American Red Cross, these supervisors were to look after equally the interests of each organization, in their respective districts. The duties of these supervisors include—supervision of local nurses, employed directly by these three organizations, advisory help to other agencies employing nurses, educational work, lectures, etc., stimulation of activities for the employment of nurses, the organization of new nursing services.

The supervision of the Metropolitan nursing service was assumed by this department, receiving in return for this supervisory work a contribution of \$1,000.00.

The colored field nurse was employed for the development of midwife supervision, and has worked mainly through the Southern part of the State, where we have a large colored population, with a few public health nurses in the field.

During the summer months an educational secretary was employed.

The satisfactory functioning of the administrative department is in a large measure due to the efficiency of its secretary, whose duties include the checking up of expenditures from both State and county funds, the handling of correspondence, the filing of nursing reports, the compilation of reports, the distribution of

educational bulletins and nursing supplies, the circulation of libraries for nurses and mothers. During the year 3,298 letters have been written, 16,874 pieces of literature have been distributed, 50 manuscripts have been prepared for publication.

2. Field Department.

Local nurses are employed by the following agencies: county delegations, chambers of commerce, Red Cross chapters, tuberculosis associations, women's clubs, cotton mill corporations. All the nurses employed by the various agencies in the county, unite in forming a county unit, the nurse who is employed by county funds acting as supervisor. In those counties employing a county health officer, the entire unit functions under the direction of the health officer, but each nurse is held responsible to the State supervising nurse for the nursing program of the State Board of Health as outlined in the two manuals—Public Health Nursing, County Unit Plan, and Midwifery.

Fifteen counties made definite appropriations for the employment of nurses, seven of these nurses so employed being a part of the health units which function under the department of rural sanitation. With the help of other agencies, nursing services have been established in ten additional counties, the supervisor of these counties being employed by Red Cross chapters. During the year, therefore, nursing service has been extended to twenty-six counties. We now have one unit of twelve nurses, one of seven, one of six, two of four, and one of two. The remaining twenty-one counties, each employed only one nurse as the scarcity of public health nurses has retarded the development of units. At the present time we have forty-four nurses in the field, twenty-five of whom are being financed in whole or in part of Red Cross funds.

ACTIVITIES OF NURSES.

The activities of the nurses include: prenatal work, infant welfare, midwifery, supervision of pre-school children, school nursing, tuberculosis nursing, control of epidemics, bedside care of the sick, and social service nursing. During six months of the year from October 1 to April 1, the nurses concentrated upon school work; during April, May and June, emphasis was laid upon infant welfare; tuberculosis was stressed during July, August and September. While special emphasis was laid on certain

phases of the work during different periods of the year, this does not mean that any part of the program was at any time permitted to lapse. Prenatal cases, infants and sick patients were carried on the visiting list during the entire year.

As the organization was in the formative stage and as new nurses were continually arriving, it has been difficult to preserve satisfactory and complete records of actual work in the field. However, by the untiring efforts of the district supervisors the record system is now functioning with a degree of accuracy and we can safely assume that from this time on we may have a comprehensive record of actual accomplishment.

Selecting from nurses' reports those figures which were deemed of sufficient accuracy to be authentic, we can report the total accomplishments of the year as follows:

Nursing visits, 18,721.
 Instructive visits, 25,856.
 School visits, 1,629.
 Miscellaneous visits.
 Mileage, 55,553.
 Schools inspected, 322.
 Pupils inspected, 22,600.
 Pre-school children inspected, 1,309.
 Total defectives, 15, 068.
 Total defects, 21,173.
 Defective eyes, 2,555.
 Defective ears, 495.
 Defective teeth, 9,712.
 Defective nose and throat, 7,444.
 Defects Corrected, 1,024.
 Miscellaneous defects, 1,581.
 Tuberculosis cases, 361.
 Prenatal cases, 523.
 Infants, 1,095.
 Post-natal cases, 315.
 Baby conferences.
 Home nursing classes.
 Midwife classes.
 Midwives registered, 1,000.
 Lectures given, 1,045.

EDUCATIONAL WORK.

Representatives of the Bureau have addressed the annual conventions of the national organizations for public health nursing, the National Federation of Business and Professional Women's Clubs, the Southern Sanitary Association, the National Tuberculosis Association, the Southern Textile Social Workers Association, where a round table for nurses was held by the director of the bureau, and the American Child Hygiene Association, the director of the bureau acting as chairman of the rural problems section. Addresses were made at the various State conventions as follows: The Graduate Nurses' Association, the Federation of Women's Clubs, the State Tuberculosis Association, the Social Workers Association and the Red Cross Conference. Upon request many local clubs have been addressed.

A demonstration of medical inspection was given to the institute for home demonstration agents held at Winthrop, and a co-operative program was worked out for county demonstration agents and nurses to use in infant welfare work.

Ten educational pamphlets were issued by the bureau. Two of these—public health nursing, county unit plan, and midwifery—were designed for manuals to be used by nurses in the field and have filled a very definite need.

A library for nurses, the pamphlet library of the national organization for public health nursing, and library for mothers, have been kept in circulation.

A complete child welfare exhibit was loaned to local people for a series of baby conferences held last spring, and was exhibited again at a series of county fairs held during the fall months.

The education secretary visited the various summer schools for teachers and presented the subject of health teaching in the grades. She also conducted a study of methods employed by other States in promoting health education in the schools. These data are now on file in the office. An effort was made to establish some sort of cooperation between the State Department of Health and the Department of Education for the preparation of a syllabus on health teaching to be used in the schools, but while this plan was regarded favorable by individual members of the Board of Education, as there has been no meeting of the Board of Education since April, the matter has not been formally presented.

The services of the Health Fairy, sent out by the National Child Health Organization, were secured, a place being given her

on the program of the State Teachers Association which met in November. A two weeks' itinerary was arranged and her demonstration was repeated at various points in the State.

Scholarships have been obtained, and fifteen nurses were sent to schools of public health nursing in our own State, a nurse is now receiving one year's instruction in Teachers' College, which will equip her as a professor of public health nursing.

The demand for public health nurses has increased at an amazing rate. Requests for nurses have been received from forty-two out of the forty-six counties of the State. No special effort has been made to stimulate activities for the development of new nursing services because of our inability to secure an adequate working staff. We regret that because of this scarcity of nurses much of the interest and enthusiasm of local people may have been lost.

(Signed)

RUTH A. DODD,
Director.

DEPARTMENT OF RURAL SANITATION AND COUNTY HEALTH WORK.

*To the Chairman and Members of the Executive Committee;
South Carolina State Board of Health.*

Gentlemen: I herewith submit a narrative and statistical report of work done by the Department of Rural Sanitation and County Health Work, during the year 1920:

Our department has grown steadily each year since it was organized. This year we have ten units of work: Administration, Traveling Moving Picture Unit and eight full-time County Health Departments in the following counties: Orangeburg, Darlington, Lee, Calhoun, Charleston, Fairfield, Newberry and Cherokee. Orangeburg County has had this department four years, Darlington County three years, Lee and Calhoun Counties two years. The other counties were organized during this year.

Conferences of county health officers have been held every three months. These conferences are wide-awake and enthusiastic meetings where the men are given an opportunity of meeting each other and exchanging their ideas. They have resulted in stimulating interest in all branches of public health work.

This year we started a credit system which has created a spirit of rivalry and emulation among the personnel. Each branch of work is rated according to its importance and the time and effort required to accomplish the result. These ratings are furnished the different departments at the end of each month.

In results accomplished, our statistical report shows a tremendous increase over our 1919 report. There were 1,862 homes sanitized in our eight counties this year, the largest number of these being in Orangeburg County. There were 2,845 homes in these counties screened, exceeding the number screened last year by 2,550. During the year 1,237 cases of hookworm disease were treated. Some of these were found infected by examinations made last year. 3,819 typhoid inoculations were given, and 22,049 persons were vaccinated against smallpox. Last year we vaccinated only 1,050, but on account of several epidemics of this disease in the State, we are trying to rigidly enforce compulsory vaccination among school children. The number of homes visited by health officers, inspectors, nurses and social workers totaled 30,609. There were 13,606 office letters written, 23,336 circular letters mailed and 76,393 pieces of literature distributed. During the year 553 lectures were given to audiences aggregating 62,463 persons. This is nearly three times as many as attended the lectures last year.

Our Moving Picture Unit was put in operation on the first day of June, and, with the exception of the month of September, has been in continuous operation. A Ford truck, equipped with electric lighting system and moving picture machine, has been sent from county to county in the care of one of our inspectors. Two films on disease prevention are shown each evening. We select six sections of the county and thoroughly advertise our meetings. We have covered 18 counties in the State and our attendance has averaged 1,000 persons per week. In organizing our new counties we have used this method of introducing the health officer to the people of his county, and at the end of the first week practically everybody in the county knows the health officer and is familiar with the type of work he is to undertake and the co-operation which they are expected to give him. One of the leading magazines in America recently carried an article, "The Effectiveness of County Health Departments," which was illustrated with a picture of our moving picture truck. One of the government agents was asked in a letter from the U. S. Depart-

ment of Agriculture, "What do you consider the best piece of educational work done in your county this year?" and the answer sent in was, "The health campaign with the moving picture unit, conduct by the Bureau of Rural Sanitation of the South Carolina State Board of Health."

The article, "Typhoid Reduction in South Carolina," showing comparative results in counties with and without health departments, appeared in the *Journal of the American Medical Association* and was copied in Public Health Reports. It also received favorable comment from *The American City* and requests for reprints have come in from all parts of the United States and from one foreign country.

The *Lee County Health Journal*, which is now coming out in its third issue, is published once a month and is sent to every school patron in that county. It gives some lessons on health and publishes statistics of work done in the county each month. As there is no newspaper in this county, it has proved a very effectual way of keeping the people in the county in touch with the activities of the health department. The first issue of "Community Health," published in Charleston County, has been issued, and is a most excellent piece of work.

The fly campaign in Darlington County was made effectual by cartoons, drawn by Darlington County school children, showing how the house fly spreads disease. A great number of homes screened and recorded in our statistical report was the result of this campaign, many of the homes being those of the poorest tenants in the county.

In Cherokee County a great many cases of tuberculosis were located by the Health Department. As a result of this fact \$12,500.00 has been collected through popular subscription for the erection of a county tuberculosis camp. Plans for the building have been submitted and accepted, deeds to the land secured, and the building will be erected within the next sixty days.

In Lee County during the medical inspection of schools, some major defects were found among children whose families were financially unable to have them corrected. The citizens of Lee County subscribed a fund of \$450.00 for the free treatment of these children. Several very serious cases are now being cared for, and a great number of small operations have been done. The specialists have treated these children free of charge, the fund being used to pay transportation and hospital bills. The

thing which has probably appealed most strongly to the parents in all our counties is the fact that each child receives an annual examination by a licensed physician.

The Newberry and Fairfield County Health Departments each had booths at their county fairs, where creditable exhibits were shown and demonstrations in infant welfare given. These counties also have taken great interest in the instruction of midwives.

Nearly twice as much work has been accomplished in eight counties this year as was accomplished in six counties last year. Our personnel is an excellent one, and to them is due the credit for the splendid results shown in the statistical report which follows.

Respectfully submitted,

L. A. RISER, M. D.,

In Charge Department Rural Sanitation and County Health Work.

STATISTICAL REPORT OF DEPARTMENT OF RURAL SANITATION AND COUNTY HEALTH WORK FOR THE YEAR 1920.

(Statistics for the year 1919 are also given for comparison.)

CONSTRUCTIVE WORK.

	1919.	1920.
Number Septic Tanks installed	433	634
Number Pits installed	517	1,175
Number Buckets installed	37	30
Number other types installed .....	...	22
Total homes sanitized	987	1,862
Number homes screened	295	2,845

EDUCATIONAL WORK.

Number lectures delivered	356	553
Attendance	23,996	62,463
Number clubs organized	71	44
Number members enrolled	2,380	1,725
Literature distributed	38,334	76,393
Office letters written	4,431	13,606
Circular letters mailed	8,374	23,336

Homes visited by inspectors	5,291	19,413
Homes visited by nurses and social workers ..	5,658	6,511
Homes visited by directors	5,219	4,685
Total homes visited	16,168	30,609

LABORATORY WORK.

Number examined for hookworm	4,966	3,408
Number infected	1,057	578
Number treated	327	*1,237

*Some of these cases treated were found infected by examinations made in 1919.

CONTAGIOUS AND INFECTIOUS DISEASES.

Number typhoid cases investigated	117	155
Number typhoid inoculations given	2,944	3,819
Number contagious diseases investigated ...	1,199	1,025
Number smallpox vaccinations given	1,050	22,049
Number tuberculosis cases investigated	152	334
Number other diseases investigated	350	1,674

SCHOOL INSPECTION.

Number schools inspected	324	353
Number pupils examined	14,997	13,834
Number defective pupils	7,107	6,890

FIFTH ANNUAL REPORT 1920 SOUTH CAROLINA SANATORIUM.

To the State Board of Health, Columbia, S. C.

Sirs: The fifth annual report of the South Carolina Sanatorium is herewith submitted.

During the past twelve months 141 patients have received treatment at the Sanatorium. Of these 72 were women and 69 men. There are now 54 patients in the institution. Of the 87 discharged, 3 were incipient, 50 moderately advanced, 23 far advanced, 4 unclassified. Their condition upon discharge was as follows: 37 improved, 7 apparently arrested, 32 not improved, 4 unclassified, 7 dead.

The following complications have occurred:

Laryngeal tuberculosis in eight patients, Otitis Media Morphanism and old Poliomyelitis twice each, tuberculous enteritis, phlebitis, chorea, tabes dorsalis, Raynaud's disease, once each.

There are now 27 moderately advanced, and 27 far advanced patients in the Sanatorium. It is readily seen that too many hopeless cases are being admitted if the best results are to be secured. Care for this class of patients should be provided in county institutions.

During the year the following improvements have been made:

The Palmetto Sanatorium for negroes was completed and will be ready for patients as soon as necessary freight arrives. A cottage was built for the former, an incinerator constructed, and two tenant houses recovered.

The truck farm and dairy have supplied the institution with fresh vegetables in season, pork, veal and milk to the amount of \$4,757.47. I may say that these fresh vegetables were furnished at a time when the price was very high and even then they were almost unobtainable. Our herd of grade Holsteins passed another tuberculin test successfully this year, and is now entitled to be placed in the list of accredited herds.

A moving picture machine which will handle standard films has been secured. It promises to be a source of recreation and pleasure for all connected with the institution. Films are available from the Extension Department of the South Carolina University without charge. The Epworth League of Columbia appreciating the need of a piano at the Sanatorium, presented one. It has proved very helpful with the entertainment furnished by the league and other friends, especially useful in the devotional exercises. We are very grateful for the services which have been conducted from time to time by the ministers and theological students of Columbia.

Cash on hand January 1, 1920, \$537.52. Dr. Hayne has furnished a contingent fund of \$7,700.00, and \$948.79 were collected from sundry sources. \$8,889.29 have been expended for supplies, etc., leaving a balance on hand December 8, 1920, \$297.02.

Respectfully submitted,

ERNEST COOPER, M. D.,
Superintendent.

REPORT OF THE FIELD SECRETARY SOUTH CAROLINA SANATORIUM.

To the Chairman and Executive Committee of the South Carolina State Board of Health.

Dear Sirs: The sum of sixty-four thousand nine hundred and fifty-five dollars was appropriated by the General Assembly of 1920 for the maintenance and upbuilding of the South Carolina and the Palmetto Sanatoriums. This amount carries an increase of sixteen thousand nine hundred and fifty-five dollars over last year's appropriation.

SOUTH CAROLINA SANATORIUM.

The South Carolina Sanatorium has every bed occupied and has a waiting list of those who are anxious to be admitted. Because of the lack of room we have been obliged to place urgent cases in county camps in the State. There are less than two hundred beds for tuberculosis patients in South Carolina. This number is hopelessly inadequate for those who need treatment.

It has not seemed advisable to ask the Legislature for another ward in 1921 because of the financial condition of affairs at the present time, but the need is great and the demand for more beds becomes more insistent every year.

PALMETTO SANATORIUM

The most gratifying accomplishment of the year's work has been the completion of the Palmetto Sanatorium.

The campaign for this building was started three years ago. Our first idea was that we should have a ward for the negroes in the South Carolina Sanatorium but at the earnest request of the negroes of the State it was decided that with their cooperation we would secure a separate institution.

The negroes pledged ten thousand dollars toward the Sanatorium during the Legislature of 1918. Of this amount we have raised eight thousand dollars. We confidently expect to secure sufficient funds for the seal sale for the negroes to fulfill their pledge. A notice of the amount paid into me as director of the seal sale for the negroes will appear at a later date. The negroes have shown a fine spirit of cooperation and they are grateful for what has been done for them. It will be our policy in the future

to have them contribute annually towards a fund which will be used to meet the needs of the institution in cases of emergency.

The Palmetto Sanatorium accommodates twenty patients. Besides the porches, lockers and baths, there is a good dining room, kitchen and pantry on the lower floor, with bed rooms and bath for the nurses on the second floor. It is well built and is a credit to the State.

Through the fund raised through the sale of the seals, we hope to put on other negro workers. We now have two in the field, one of whom is employed by the S. C. T. B. Association. Our field worker has been invaluable, and we feel that we can say with truth that without her capable services it would have been impossible to secure the assistance and cooperation of the negroes. She has been responsible for the campaigns for funds, which have been put on from time to time in the interest of the institution. She conducts health meetings in all parts of the State and spends much of her time in the field.

STATE FREE BED FUND.

This fund has been of inestimable benefit to those who have occupied free beds during the year. Eighty-four patients have occupied beds paid for from this fund. Some of the patients have been benefited within a few months while others have stayed several months before they could return to their home duties. We have received letters from a score of those who owe their lives and their restoration to useful citizenship to the fact that they were wards of the State during the period of invalidism. It is to be hoped that this fund will be continued.

COUNTY AND CITY FUNDS.

Thirteen patients have been cared for through funds appropriated by cities and counties. In time as county Sanatoria are built these funds will no longer be available for State use. The sentiment is growing for the establishment of these county camps. We feel that it is best in every way to have the very ill patients who wish sanatorium treatment to be accommodated in camps near their homes and we lend our hearty support to the movement.

COMMITTEE ON ADMITTANCE.

As clerk of this committee, we have received all applications for treatment at the Sanatorium. We have investigated all cases

applying for free treatment and have conducted all business arrangements with counties and cities making contributions.

We have received all funds paid by patients who are responsible for their own expenses.

Financial Statement From January 1 to December 4, 1920.

Funds received from pay patients	\$ 5,053 00
Funds received from county and city patients.....	2,425 00
State free bed fund	9,592 00

\$17,058 00

Bills amounting to \$1,159.00 have been sent to the counties and cities who have appropriated funds for the year 1920. These moneys when paid in will complete payment of cities and counties for the year ending December 31.

Respectfully submitted,

ANNIE IREDELL REMBERT,

Field Secretary South Carolina Sanatorium.

REPORT OF THE STATE SANITARY ENGINEER 1920.

*To the Chairman and Members of the Executive Committee,
South Carolina State Board of Health.*

Gentlemen: The energy of the State Sanitary Engineer has been spread over such an extensive range of activities that no startling accomplishments can be legitimately recorded. Perhaps a short summary might be illustrative. Under the heading of Water Supply may be listed field surveys for certification of water supplied for drinking purposes to the railroads in South Carolina; investigation of the reported pollution of the Paris Mountain supply for Greenville; proposed project for artesian well supplies for Dillon County schools; water supply for Cherokee County Tuberculosis Sanatorium; new supply for Greenwood; hotel supplies showing indications of pollution. Under Sewage Disposal and Rural Sanitation may be listed the completion of the Dillon rural school sanitation project; improvement of school sanitation at Andrews, Denmark and Fort Mill; improper sewage disposal at Wagener, Frogmore and the Dillon, Maple and Hamer Mills in cooperation with the Department of Agriculture, Commerce and Industries, typhoid fever investiga-

tions at Snelling, Leesville, Pacific Mills and in Greenville County; regulations for proper sewage disposal for Dillon and Inman and Cowpens Mill. Under Malaria Control might be mentioned assistance in the Bamberg project; investigation as to the advisability of control operations at Conway; securing Andrews for control operation for 1921. Grouping the remainder of activities under Office and General, I have assisted on the budget expenditures accounting, prepared typhoid fever, diphtheria charts, advertising map, prepared the inventory for the Budget Commission and the chart of organization for the State's efficiency experts, prepared the bulletin and all forms for the Hotel Inspection, a compilation of replies to the milk questionnaires, plans for the incinerator at the Tuberculosis Sanatorium at State Park, checked the plans of the New Citadel with respect to Sanitary equipment, investigated—when necessary—all complaints not strictly of a medical nature as the abattoirs at Greenwood, Greer and Andrews Yard, and prepared an extensive questionnaire and replies as to the activities of the engineering sections of the adjacent Southern States with a report as to the organization and activities of an engineering section of this Board.

The recent census revealed that the State is becoming more densely populated especially in the Piedmont section and towns and mills are rapidly installing water and sewerage systems. Thus our streams are becoming more polluted for there is not a sewage purification plant in the State handling municipal wastes correctly. As the cities grow their initial water supply from wells proves inadequate and filtration of surface water is necessary. Thus it results that 21 city supplies and many mills are using filtered water. Of the 21 city supplies only three are intelligently operated and controlled. Thus 18 supplies handling known polluted waters are given to the pupils by officials who do not know what they are doing, but who want to know how to handle their waters. A fair estimate of the number of people served with water that may at any moment become dangerous to their health is 100,000, and the number of country folk that are occasional users of these city supplies is unknown. The number of mill people who are furnished water from dangerous sources is not included in the above conservative estimate. The remedy that at once suggests itself is instruction of operators. Are these eighteen men not as instrumental in guarding the health of the State as the midwives?

The dangers from water borne diseases can be practically eliminated in South Carolina by proper State and local control of the water. In order to accomplish this the State Board of Health should have legal power to supervise the public water supplies throughout the State. At present there is nothing on the statute books that will enable the State to even analyze four times a year the supplies of mill villages, colleges and institutions and commercial spring companies selling bottled waters. The State has never had a water borne typhoid fever epidemic from a municipal supply but with the rapidly increasing pollution of our streams much more careful operation and control of all our filter plants, than is now given, will be necessary to maintain this record.

Respectfully submitted,

E. L. FILBY,
State Sanitary Engineer.

REPORT OF STATE HOTEL INSPECTOR.

Columbia, S. C., December 6, 1920.

Executive Board State Board of Health, Columbia, S. C.

Gentlemen: The following is the annual report of the State Hotel Inspection Department:

We began the work on April 1, with a tentative appropriation by the Legislature of \$6,000, which appropriation has been sufficient to carry on the work for the nine months, beginning April 1 and ending December 31.

The work being new, we adopted the plan of instructing the hotels and restaurants in the law, and making such suggestions as we thought best. We found the spirit of cooperation existing in most instances, finding only one not willing to comply. This one has been closed. We have made two complete trips over the State, and visiting a great many places several times, making in all over two thousand inspections in various parts of the State. The hotels are beginning to comply with the law generally, and we can see improvement in sanitary conditions in a great majority of them.

We have collected in fees as prescribed by the law, \$6,700 in round numbers, this being turned into the State Treasury to the

credit of this department. We have disbursed the \$6,000 appropriated by the Legislature, leaving a balance on hand in State Treasury of \$700. The disbursements include: Salaries, traveling expenses, printing of copies of the law for distribution to the hotels and restaurants, printing of score cards, payment for an automobile now in use. Payment of laboratory supplies used in water analysis, postage and stationery.

Respectfully submitted,

J. H. WOODWARD,
Hotel Inspector.

REPORT OF CHEMIST AND BACTERIOLOGIST.

Charleston, S. C., December 22, 1920.

To the Chairman and Members of the Executive Committee of the State Board of Health:

Gentlemen: I have the honor to submit the following tabulated report of analysis of samples of water from the public water supplies of South Carolina, made under the direction of the State Board of Health, in accordance with the laws of South Carolina relating to the purity of the water supplies of towns and cities, I Code, Section 1599, and of information as to officials of local boards of health and plants, source, capacity, treatment, daily consumption and consumption per capita, discharge of sewage and disposition of garbage.

Very respectfully,

FRANCIS L. PARKER, M. D.

RESULTS IN PARTS PER MILLION.

Water Supply of Abbeville, S. C.

Abbeville Water & Electric Plant. Owned by City, Superintendent, C. P. Townsend, Jr. In charge of collection of samples, C. P. Townsend, Jr. Chairman local Board of Health, Dr. C. H. Murray.
 Source: Creek, 1 1-4 miles from city. Capacity, 250,000 gallons per day; filtered by mechanical filters. Treatment, one-half grain alum per gallon. Capacity of plant, 500,000 gallons per day. Average consumption, 200,000 gallons per day. Consumption per capita, 40 gallons per day. Service metered. Sixty per cent. of residences using city water supply; 60 per cent. of city sewered and have water closets. Sewerage empties into creek. No garbage disposal plant. Garbage dumped in old fields and gullies.

Sample Drawn.	Chlorine.	Free Ammonia.	Albuminoid Ammonia.	Nitrogen as Nitrites.	Nitrogen as Nitrates.	Total Solids.	Bacterial Indications of Contamination.	Chemical Indications of Contamination.
March 30, 1920	6.00	0.02	0.03	0.001	0.20	94.00	Negative	Negative
June 24, 1920	7.00	0.01	• 0.06	0.000	0.00	130.00	Negative	Negative
September 17, 1920	9.00	0.01	0.02	0.000	0.20	105.00	Negative	Negative
December 8, 1920	9.00	0.02	0.03	0.000	0.00	41.00	Negative	Negative

Water Supply of Aiken, S. C.

City Water Works. Superintendent, H. Sudlow. In charge of collection of samples, H. Busch. Chairman local Board of Health, Dr. H. T. Hall.
 Source: Collection of Springs, 6 1-2 miles from city. Capacity, 2,000,000 gallons per day, not filtered. Capacity of plant, pumpage 1,500,000 gallons per day. Average consumption, 350,000 gallons per day. Consumption per capita, 80 gallons per day. Service, 100 per cent. city using city water supply. Sewerage system: 75 per cent. city sewered, 50 per cent. buildings connected with sewer and have water closets. Sand filter beds. Sewerage empties into small streams. No garbage disposal plant.

March 30, 1920	4.00	0.02	0.01	0.00	0.30	40.00	Negative	Negative
July 26, 1920	5.00	0.02	0.02	0.00	0.20	38.00	Negative	Negative
September 18, 1920	3.00	0.01	0.02	0.002	0.30	34.00	Negative	Negative
December 10, 1920	5.00	0.01	0.01	0.001	0.20	17.00	Negative	Negative

Water Supply of Allendale, S. C.

Commission of Public Works. Owned by town. Superintendent, J. W. Mallard. In charge of collection of samples, J. W. Mallard. Chairman of local Board of Health, Dr. J. E. Warnock.
Source: Well near the center of town; not filtered. Capacity 30,000 gallons. Average consumption, 25,000 gallons per day. Consumption per capita, 42 gallons per day. Service metered, 60 per cent. of residences using city water supply; 60 per cent. of buildings connected with sewer and have water closets. Septic tank and sprinkling filter. Sewerage empties into Cosawhatchie River. No garbage disposal plant; garbage dumped in open fields 1-2 miles from city and burned.

March 20, 1920	6.00	0.01	0.01	0.00	0.10	153.00	Negative
June 14, 1920	9.00	0.01	0.02	0.00	0.00	135.00	Negative
September 21, 1920	4.00	0.01	0.03	0.00	0.00	136.00	Negative
December 8, 1920	6.00	0.01	0.02	0.00	0.00	125.00	Negative

Water Supply of Anderson, S. C.

Southern Public Utilities Co. Manager, H. A. Orr. In charge of collection of samples, R. T. Long. Chairman of local Board of Health, Dr. B. A. Henry.
Source: Bailey's Creek, 2 miles, and Rocky River, 3 miles from the city. Capacity 20,000,000 gallons per day. Filtered by mechanical filter. Treatment, 1-2 grain alum per gallon. Capacity of plant, 2,500,000 gallons per day. Consumption per capita, 50 gallons per day. Service metered, 96 per cent. of buildings use city water supply. Sewerage system: 93 per cent. of city sewerred; No sewerage disposal plant. Sewerage empties into Rocky River and Genorostee Creek.

March 23, 1920	5.00	0.01	0.01	0.01	0.20	91.00	Negative
June 9, 1920	4.00	0.01	0.01	0.00	0.10	66.00	Negative
September 20, 1920	4.00	0.01	0.03	0.00	0.00	112.00	Negative
December 6, 1920	7.00	0.03	0.03	0.00	0.10	49.00	Negative

Water Supply of Bamberg, S. C.

Light & Water Department of Commission of Public Works. Owned by city. Superintendent, R. Clyde Rowell. In charge of collection of samples, A. L. Edwins. Chairman of Board of Health, Dr. H. J. Stuckey.
Source: Flowing well, artesian, in city, diameter 3 inches, depth 480 feet. Capacity of plant, 70,000 gallons per day. Average consumption, 60,000 gallons per day. Service metered; 60 per cent. buildings using city water supply; 60 per cent. have septic tanks. Sewerage system: City is not sewerred, except private tanks. No garbage disposal plant. Garbage disposed of in dump wagon.

June 28, 1920	5.00	0.01	0.02	0.00	0.00	75.00	Negative
November 11, 1920	6.00	0.01	0.03	0.00	0.00	79.00	Negative
December 11, 1920	9.00	0.01	0.01	0.00	0.00	47.00	Negative

RESULTS IN PARTS PER MILLION.—(Continued.)

Water Supply of Barnwell, S. C.

Barnwell Light & Water Works. Owned by city. Superintendent, F. H. Miller. In charge of collection of samples, F. H. Miller. Chairman of local Board of Health, Charlie Brown.

Source: Two wells in city, 4 1/2 and 6 inches in diameter, 151 feet deep. Capacity 72,000 gallons per day, not filtered. Capacity of plant, 72,000 gallons per day. Average consumption, 45,000 gallons per day. Consumption per capita, 30 gallons per day. Service 50 per cent. metered; 50 per cent. buildings using city water supply. No sewerage system; 90 per cent. of buildings have water closets; 10 per cent have septic tanks.

Sample Drawn.	Chlorine.	Free Ammonia.	Albuminoid Ammonia.	Nitrogen as Nitrates.	Nitrogen as Nitrites.	Total Solids.	Bacterial Indications of Contamination.	Chemical Indications of Contamination.
March 15, 1920	6.00	0.01	0.00	0.00	0.00	118.00	Negative	Negative
June 8, 1920	8.00	0.04	0.05	0.00	0.00	117.00	Negative	Negative
September 18, 1920	5.00	0.01	0.02	00.00	0.00	97.00	Negative	Negative
December 6, 1920	8.00	0.01	0.01	0.00	0.00	102.00	Negative	Negative

Water Supply of Batesburg, S. C.

Commission of Public Works. Owned by town. Superintendent, R. E. Hoover. In charge of collection of samples, R. E. Hoover. Chairman of local Board of Health, Dr. R. M. Timmerman.

Source: Two wells in city. Not filtered. Capacity 36,000 gallons per day. Average consumption 20,000 gallons per day. Consumption per capita 2 gallons per day. Service metered; 100 per cent. buildings using city water supply; 10 per cent. septic tanks. No sewerage system. No garbage disposal plant. Garbage hauled outside city and burned.

May 18, 1920	7.00	0.02	0.04	0.00	0.00	126.00	Negative	Negative
September 18, 1920	7.00	0.01	0.01	0.001	0.00	103.00	Negative	Negative

Water Supply of Beaufort, S. C.

Town of Beaufort, S. C. Water and Light Department. Superintendent Water and Light, R. W. Logan. In charge of collection of samples, John Collier. Chairman of local Board of Health, Dr. C. M. Guffin. Source: Well 12 inches in diameter and 125 feet deep, in center of city. Not filtered. Average consumption, 50,000 gallons per day. Consumption per capita 200 gallons per day. Service partly metered, 30 per cent. buildings connected with city water supply. No sewerage system; 50 per cent. private sewers. Sewerage empties into Salt Water River. No sewerage disposal plant. Garbage dumped at edge of city limits and burned.

April 20, 1920	32.00	0.03	0.04	0.007	0.10	232.00	Negative
July 2, 1920	33.00	0.09	0.20	0.000	0.00	196.00	Negative
September 17, 1920	33.00	0.05	0.02	0.000	00.00	206.00	Negative
December 9, 1920	32.00	0.04	0.04	0.000	00.00	209.00	Negative

Water Supply of Bennettsville, S. C.

Bennettsville Electric & Water Plant. Owned by city. Manager, E. C. Morrison. In charge of collection of samples, E. C. Morrison and J. M. Easterling. Chairman of local Board of Health, Dr. O. A. Matthews. Source: Eight wells, 4 1-2 inches in diameter, six 60 feet deep and two 40 feet deep, pumped. Average consumption, 275,000 gallons per day. Capacity of plant, 500,000 gallons per day. Consumption per capita 60 gallons per day. All services except public services metered. 95 per cent. buildings in the business and residence section and 45 per cent. buildings in corporate limits using city water supply. Sewerage system: 87 per cent. of buildings in the residence section and in the business section and 55 per cent. buildings in city limits connected with sewer and have water closets. Septic tank. Sewerage empties into Crooked Creek 1 1-2 miles from city. Garbage disposal plant.

March 8, 1920	17.00	0.02	0.03	0.00	0.70	102.00	Negative
June 9, 1920	20.00	0.02	0.02	0.00	0.40	80.00	Negative
November 20, 1920	20.00	0.01	0.01	0.00	0.40	125.00	Negative
December 9, 1920	22.00	0.02	0.01	0.00	0.40	192.00	Negative

Water Supply of Camden, S. C.

City of Camden Water & Light Plant. Superintendent, W. B. Allred. In charge of collection of samples, John W. Wilson and E. D. McCutchen. Chairman of local Board of Health, C. A. West. Source: Spring fed creek, 1 mile from city limits. Capacity 7,200,000 gallons per day, filtered by mechanical filters. Treatment 1 1-4 grains alum per gallon, 1-29 grains soda ash per gallon. Capacity of plant 575,000 gallons per day. Service Eighty-one per cent. of buildings connected and using city water supply. Sewerage system: Fifty-four per cent. of buildings connected with sewerage system and have water closets. Sewerage empties into Wateree River. No garbage disposal plant. Garbage emptied on outskirts of town and partly burned.

March 15, 1920	5.00	0.01	0.04	0.002	0.10	46.00	Negative
June 9, 1920	5.00	0.01	0.02	0.000	0.10	48.00	Negative
September 18, 1920	5.00	0.01	0.03	0.000	0.00	27.00	Negative
December 9, 1920	4.00	0.01	0.03	0.000	0.00	19.00	Negative

RESULTS IN PARTS PER MILLION.—(Continued.)

Water Supply of Charleston, S. C.

City Water Department. Commission of Public Works. Manager and Engineer, James E. Gibson. In charge of collection of samples, Dr. F. L. Parker. Chairman of local Board of Health, J. A. Ball.
Source: Goose Creek, 12 miles from the city. This is an impounded supply, the reservoir being an old tide water basin dammed off from tidal sea water. Area of flooded reservoir, 2,100 acres. Capacity, 2,700,000 gallons, which would supply 8,000,000 gallons per day. Filtered by mechanical filter. Treatment, sulphate of alumina, hydrate of lime and liquid chlorine. Capacity of plant, pumping, 10,000,000 gallons; filters 14,000,000 gallons. Average consumption, 6,500,000 gallons per day. Consumption per capita, 85 gallons. Service 98 per cent. metered. Supplementary supply, Ashley River, Bacon's Bridge; drainage area 231 square miles. Available supply as at present developed, 2,000,000 gallons. Sewerage system: Sewerage empties into Charleston Harbor. Garbage disposal plant, incinerator.

Sample 'Drawn.	Chlorine.	Free Ammonia.	Albuminoid Ammonia.	Nitrogen as Nitrates.	Nitrogen as Nitrates.	Total Solids.	Bacterial Indications, of Contamination.	Chemical Indications of Contamination.
May 3, 1920	19.00	0.02	0.12	0.00	0.20	104.00	Negative	Negative
August 12, 1920	8.00	0.02	0.13	0.00	0.00	71.00	Negative	Negative
December 17, 1920	18.00	0.05	0.15	0.00	0.00	78.00	Negative	Negative

Water Supply of Chester, S. C.

Chester Water Works. Owned by city. Superintendent, J. H. McLure. In charge of collection of samples J. H. McLure. Chairman of local Board of Health, Dr. W. R. Wallace.
Source: River 3 miles from city. Capacity 7,200,000 gallons per day, filtered by mechanical filter. Treatment 2 grains alum per gallon. Capacity of plant, 720,000 gallons per day. Average consumption 300,000 gallons per day. Consumption per capita, 60 gallons per day. Service metered, 85 per cent of buildings using city water supply. Sewerage system: 85 per cent of city sewered and have water closets. No sewerage disposal plant. Sewerage empties into Fan Yard Branch. Incinerator installed for disposal of garbage.

March 5, 1920	7.00	0.02	0.03	0.00	0.40	126.00	Negative	Negative
June 28, 1920	9.00	0.02	0.03	0.00	0.00	101.00	Negative	Negative
September 16, 1920	8.00	0.01	0.01	0.00	0.00	84.00	Negative	Negative
December 15, 1920	9.00	0.01	0.04	0.00	0.00	131.00	Negative	Negative

Water Supply of Clinton, S. C.

Municipal Water and Light Plant. Superintendent, E. B. Mills. In charge of collection of samples, B. B. Mills. Chairman of local Board of Health, Dr. T. L. W. Bailey.
Source: Two wells, 10 and 8 inches in diameter, and 500 feet deep, in city. Capacity, 180,000 gallons per day; not filtered. Average consumption, 75,000 gallons per day. Consumption per capita, 25 gallons per day. Service metered, 80 per cent. of buildings using city water supply. Sewerage system: 75 per cent. of buildings connected with sewer and have water closets. Septic tanks. Sewerage empties into two streams. No garbage disposal plant. Garbage dumped outside of city limits.

June 14, 1920	10.00	0.01	0.02	0.00	0.20	183.00	Negative
September 20, 1920	10.00	0.01	0.02	0.00	0.20	161.00	Negative
December 7, 1920	13.00	0.01	0.01	0.00	0.30	166.00	Negative

Water Supply of Columbia, S. C.

Water Department, City of Columbia, S. C. Superintendent, F. C. Wyse. In charge of collection of samples, G. H. White for Water Works, and Dr. Jean LaBorde for Board of Health. Local Health Officer, Dr. Jean LaBorde.
Source: Congaree River, one mile from city. Capacity practically unlimited. Filtered by rapid sand filters. Capacity of plant 13,000,000 gallons per day. Treatment 1.0 grain alum per gallon. Average consumption 9,000,000 gallons per day. Consumption per capita within city 141 gallons per day, in cantonment 79 gallons per day. Service metered 99 per cent. buildings using city water. Sewerage system: 85 per cent. of buildings connected with city sewer and have water closets. Sewerage empties into Congaree River. Garbage is being dumped in out of the way places and covered with earth at present, and two disposal plants are now in operation.

March 8, 1920	8.00	0.01	0.03	0.00	0.30	109.00	Negative
June 14, 1920	5.00	0.01	0.02	0.00	0.00	54.00	Negative
September 14, 1920	7.00	0.02	0.04	0.00	0.20	70.00	Negative

Water Supply of Darlington, S. C.

Palmetto Power and Light Co. Superintendent, T. Miller. Whitr. In charge of collection of samples, T. Miller Whitr. Chairman of local Board of Health, Dr. J. T. Coggeshall.
Source: Wells, diameter 8 inches, depth 385 feet; diameter 6 inches, depth 200 feet; diameter 6 inches, depth 195 feet, in city. Capacity, 288,000 gallons per day. Capacity of plant, 225,000 gallons per day. Average consumption 125,000 gallons per day. Consumption per capita, 45 gallons per day. Service metered, 100 per cent. of buildings using city water supply. Sewerage system: Almost all of town is sewerd, 75 per cent. of buildings connected with sewer and have water closets.

March 15, 1920	5.00	0.01	0.03	0.00	0.00	75.00	Negative
June 17, 1920	5.00	0.04	0.07	0.00	0.00	72.00	Negative
September 18, 1920	7.00	0.02	0.02	0.00	0.00	70.00	Negative
December 16, 1920	9.00	0.01	0.02	0.00	0.00	67.00	Negative

RESULTS IN PARTS PER MILLION.—(Continued.)

Water Supply of Dillon, S. C.

Dillon Water Works Plant. Owned by city. Secretary and Treasurer, B. A. Bedenbaugh. In charge of collection of samples, M. D. Davis. Chairman of local Board of Health, Dr. J. A. Hamer.
Source: About 2 miles from city river. Capacity, 288,000 gallons per day. Filtered by a mechanical filter. A duplicate pumping system has been installed at river. Treatment, soda ash and alum. Capacity of plant 130,000 gallons per day. Average consumption 20,000 gallons per day. Consumption per capita, 30 gallons per day. Service metered, 50 per cent. of buildings using city water supply; 75 per cent. of city connected with sewerage system; 50 per cent. of buildings have water closets. Septic tank.
Sewerage system empties into Pee Dee River. No garbage disposal plant. Garbage dumped in low and suitable places.

Sample Drawn.	Chlorine.	Free Ammonia.	Albuminoid Ammonia.	Nitrogen as Nitrates.	Total Solids.	Bacterial Indications of Contamination.	Chemical Indications of Contamination.
March 27, 1920	8.00	0.05	0.02	0.004	101.00	Negative	Negative
June 14, 1920	10.00	0.01	0.02	0.000	60.00	Negative	Negative
November 25, 1920	10.00	0.02	0.03	0.000	122.00	Negative	Negative

Water Supply of Easley, S. C.

City Water and Light Plant. Owned by City. Superintendent, C. D. Bolt. In charge of collection of samples, C. D. Bolt.
Chairman local Board of Health, Ed. Farr.
Source: Wells and branch. Wells, diameter 2 inches, depth 40 feet, pumped. Distance from city, three-quarters of a mile. Capacity 1,000,000 gallons per day; branch water filtered by mechanical filter. Treatment, lime and sulphate of alumina. Average consumption, 75,000 gallons per day. Consumption per capita, 17 gallons per day. Service metered, 75 per cent. of buildings using city water supply. Six miles of sewerage, disposal septic tank. No garbage disposal plant. Garbage dumped into large ditch.

March 15, 1920	3.00	0.02	0.03	0.00	80.00	Negative	Negative
June 17, 1920	5.00	0.01	0.02	0.00	83.00	Negative	Negative
November 6, 1920	4.00	0.01	0.01	0.00	54.00	Negative	Negative
December 8, 1920	6.00	0.01	0.01	0.00	59.00	Negative	Negative

Water Supply of Florence, S. C.

City of Florence Water Department. Owned by city. Superintendent, In charge of collection of samples, Chairman of local Board of Health, Dr. L. E. Ravenel.
Source: Three wells, capacity, 1,000,000 gallons per day, not filtered. Average consumption, 600,000 gallons per day. Consumption per capita, 91 gallons per day. Service metered, 90 per cent. of buildings using city water supply. Consumption per day. Sewerage system: 60 per cent. of city sewered: 40 per cent. connections and water closets. Sewerage disposal plant. Sewerage empties into Jeffries Creek. Garbage disposal. Nye odorless incinerator, 10 ton capacity, located on outskirts of city.

April 28, 1920	20.00	0.01	0.02	0.00	0.00	147.00	Negative
July 12, 1920	30.00	0.02	0.04	0.00	0.00	163.00	Negative
September 25, 1920	27.00	0.01	0.02	0.00	0.10	166.00	Negative
December 14, 1920	21.00	0.01	0.02	0.00	0.00	137.00	Negative

Water Supply of Gaffney, S. C.

Board of Public Works. Owned by city. Superintendent, L. V. Gaffney. In charge of collection of samples, L. V. Gaffney.
Chairman of local Board of Health, G. G. Byers.
Source: Cherokee Creek 3 1-2 miles from city, filtered by gravity filter. Treatment, 1 grain alum per gallon. Capacity of plant, 1,000,000 gallons per day. Average consumption 150,000 gallons per day. Consumption per capita, 25 gallons per day. Service metered, 12 per cent. of buildings using city water supply.
Sewerage system: 8 per cent. of buildings connected with sewer and have water closets. Sewerage disposal plant, Sewerage empties into branch. Garbage disposal plant, incinerator, septic tank.

June 24, 1920	5.00	0.03	0.04	0.00	0.10	134.00	Negative
November 24, 1920	6.00	0.01	0.02	0.00	0.10	65.00	Negative
December 15, 1920	4.00	0.02	0.03	0.00	0.10	41.00	Negative

Water Supply of Georgetown, S. C.

Black River Water Co. G. S. Clarke, President. In charge of collection of samples, Dr. H. L. Wright. Chairman of local Board of Health, Dr. W. W. Galliard.
Source: Black River, 75 miles from city by river, 15 miles by air line. Capacity 1,000,000 gallons per day. Filtered by slow sand filter. No treatment. Capacity of plant, 1,000,000 gallons per day. Average consumption, 177,000 gallons per day. Consumption per capita, 75 gallons per day. Service metered.
Sewerage system: 60 per cent. of city sewered. Sewerage empties into Sampit River. No garbage disposal plant. Garbage dumped in low places on abandoned rice fields.

March 23, 1920	8.00	0.01	0.10	0.00	0.30	101.00	Negative
June 19, 1920	8.00	0.01	0.06	0.00	0.10	60.00	Negative
September 18, 1920	8.00	0.01	0.06	0.00	0.30	77.00	Negative
December 4, 1920	11.00	0.02	0.08	0.00	0.20	80.00	Negative

RESULTS IN PARTS PER MILLION.—(Continued.)

Water Supply of Graniteville, S. C.

Graniteville Manufacturing Company. Superintendent G. H. Leitner. In charge of collection of samples, E. F. Delvin. Source: Spring 1 mile from town. Not filtered. Capacity 40,000 gallons per day. Average consumption, 22,000 gallons per day. Consumption per capita, 20 gallons per day. Service not metered. 52 per cent. of buildings using city water supply. Sewerage system: 10 per cent. of city sewered, 2 per cent. of buildings connected with sewer. Sewerage empties into Horse Creek. No garbage disposal plant. Garbage dumped outside of town limits.

Sample Drawn.	Chlorine.	Free Ammonia.	Albuminoid Ammonia.	Nitrogen as Nitrates.	Total Solids.	Bacterial Indications of Contamination.	Chemical Indications of Contamination.
March 8, 1920	5.00	0.02	0.03	0.00	66.00	Negative	Negative
June 8, 1920	5.00	0.02	0.04	0.00	26.00	Negative	Negative
September 25, 1920	4.00	0.01	0.01	0.001	36.00	Negative	Negative
December 8, 1920	9.00	0.01	0.01	0.000	43.00	Negative	Negative

Water Supply of Greer, S. C.

Commission of Public Works. Owned by city. Superintendent, C. C. McGowan. In charge of collection of samples, C. C. McGowan. Chairman of local Board of Health, Dr. S. E. Holtzclaw.

Source: Four wells in city. Capacity 230,000 gallons per day; not filtered. Average consumption, 100,000 gallons per day. Service metered, 32 per cent. of buildings using city water supply. Sewerage system: 30 per cent. of buildings connected with sewerage system and have water closets. Sewerage empties into branches. No garbage disposal plant. Garbage dumped into fields outside of city limits.

July 30, 1920	5.00	0.01	0.10	0.00	60.00	Negative	Negative
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Water Supply of Greenville, S. C.

Greenville City Water Works. Superintendent, H. W. Perry. In charge of collection of samples, H. W. Perry. Chairman of local Board of Health, Dr. Davis Furman.

Source: Streams in Paris Mountain to reservoirs, 8 and 12 miles from city; gravity system. Capacity, 5,000,000 gallons per day; not filtered. Average consumption, 2,000,000 gallons per day. Consumption per capita 50 gallons per day. Service metered: 98 per cent. of buildings using city water supply. Additional source run only during dry season. Pump station on Enoree River. 3,000,000 gallons daily capacity. Filtered and chlorinated when used.

Sewerage system: 75 per cent. of city sewer and have water closets. Sewerage empties into Reedy River. Garbage disposal plant. Garbage dumped at crematory and burned.

March 8, 1920	3.00	0.01	0.02	0.00	0.30	56.00	Negative	Negative
June 8, 1920	4.00	0.02	0.03	0.00	0.00	20.00	Negative	Negative
September 10, 1920	5.00	0.01	0.02	0.00	0.00	72.00	Negative	Negative
December 7, 1920	5.00	0.01	0.03	0.00	0.00	12.00	Negative	Negative

Water Supply of Greenwood S. C.

Greenwood Water and Electric Plant. Owned by city. Superintendent, A. J. Sproles. In charge of collection of samples, A. J. Sproles. Chairman of local Board of Health, Dr. W. P. Turner.

Source: Eight wells, diameter 8 inches, 300 feet deep, 1 1-2 miles from city. Capacity, 1,440,000 gallons per day; not filtered. Average consumption, 350,000 gallons per day. Consumption per capita, 40 gallons per day. Service metered, 75 per cent. of buildings using city water supply.

Sewerage system: 60 per cent. of city sewer. Treatment, septic tank on to sand and gravel. No garbage disposal plant. Garbage dumped on vacant lots.

March 26, 1920	7.00	0.03	0.04	0.00	0.10	245.00	Negative	Negative
June 9, 1920	7.00	0.01	0.02	0.00	0.10	227.00	Negative	Negative
September 18, 1920	9.00	0.01	0.02	0.00	0.00	214.00	Negative	Negative
December 8, 1920	8.00	0.03	0.03	0.00	0.10	212.00	Negative	Negative

Water Supply of Hartsville, S. C.

Board of Commission of Public Works. Owned by city. Superintendent, J. A. Tyner. In charge of collection of samples, J. A. Tyner. Chairman of local Board of Health, Dr. R. Coker.

Source: Three wells, 3 1-2 inches in diameter, 287 feet deep; 4 inches in diameter, 260 feet deep; 6 inches in diameter, 252 feet deep; pumped. Capacity, 825,000 gallons per day, not filtered. Capacity of plant 237,600 gallons per day. Average consumption 200,000 gallons per day. Consumption per capita, 60 gallons per day, service metered.

Sewerage system: 65 per cent. of city sewer. Sewerage empties into Black Creek. Garbage disposal plant. Garbage burned; 15 per cent. new water and sewer being installed.

March 8, 1920	4.00	0.01	0.02	0.00	0.20	116.00	Negative	Negative
June 9, 1920	5.00	0.01	0.03	0.00	0.10	39.00	Negative	Negative
September 16, 1920	9.00	0.03	0.04	0.00	0.00	21.00	Negative	Negative
December 3, 1920	6.00	0.01	0.01	0.00	0.00	15.00	Negative	Negative

RESULTS IN PARTS PER MILLION (Continued).

Water Supply of Kingstree, S. C.

Kingstree Water Works. Owned by city. Superintendent, S. C. Anderson. In charge of collection of samples, S. C. Anderson. Chairman of local Board of Health, T. M. McCutchen. Capacity, 237,600 gallons per day; not filtered. Capacity of plant, 237,600 gallons per day. Average consumption, 175,000 gallons per day. Consumption per capita, 60 gallons per day. Service metered, 40 per cent. of buildings connected with sewerage and have water closets. Sewerage disposal plant; sewerage treated with kerosene and salt. Sewerage empties into Black Creek. No garbage disposal plant. Garbage dumped outside city and burned.

Sample Drawn.	Chlorine.	Free Ammonia.	Albuminoid Ammonia.	Nitrogen as Nitrates.	Nitrogen as Nitrates.	Total Solids.	Bacterial Indications of Contamination.	Chemical Indications of Contamination.
March 15, 1920	7.00	0.04	0.04	0.00	0.20	332.00	Negative	Negative
June 9, 1920	4.00	0.02	0.03	0.00	0.10	252.00	Negative	Negative
September 16, 1920	8.00	0.04	0.01	0.00	0.00	275.00	Negative	Negative
December 1, 1920	7.00	0.04	0.03	0.00	0.20	224.00	Negative	Negative

Water Supply of Lancaster, S. C.

In charge of Commission of Public Works. Owned by city. R. S. Harper, Superintendent. In charge of collection of samples, Dr. W. F. Laing. Chairman of local Board of Health, W. R. Thompson. Capacity, 1,000,000 gallons per day; filtered by mechanical filter. Treatment, 1 grain alum per gallon. Capacity of plant, 720,000 gallons per day. Average consumption, 300,000 gallons per day. Consumption per capita, 20 gallons per day. Service metered, 75 per cent. of city sewered and have water closets. Service metered. 75 per cent. of buildings using city water supply. Sewerage empties into Little River. No garbage disposal plant. Garbage dumped outside limits of city and treated with lime when necessary.

March 20, 1920	9.00	0.01	0.03	0.00	0.20	78.00	Negative	Negative
July 26, 1920	10.00	0.02	0.04	0.00	0.00	68.00	Negative	Negative

Water Supply of Laurens, S. C.

Municipal Light and Water Plant. Superintendent, J. E. Philpot. In charge of collection of samples, J. E. Philpot. Chairman local Board of Health, Dr. R. E. Hughes.
Source: Wells and creek within city limits; filtered with mechanical filter. Treatment 1 grain alum per gallon. Capacity of plant, 250,000 gallons per day. Average consumption 300,000 gallons per day. Consumption per capita, 25 gallons per day. Service metered. 90 per cent. of buildings using city water supply. Water chlorinated. One new pump at river increasing water supply.
Sewerage system: 75 per cent. of buildings connected with sewer and have water closets. Sewerage empties into Little River. No garbage disposal plant. Garbage dumped outside city limits and treated with lime when necessary.

March 15, 1920	7.00	0.02	0.03	0.00	0.30	* 110.00	Negative
August 13, 1920	6.00	0.05	0.10	0.00	0.10	105.00	Negative
September 16, 1920	7.00	0.01	0.04	0.00	0.30	118.00	Negative
December 3, 1920	7.00	0.02	0.03	0.00	0.10	69.00	Negative

Water Supply of Manning, S. C.

Manning Water Works. Owned by city. Superintendent, F. P. Ervin. In charge of collection of samples, F. P. Ervin.
Source: Well, 6 inches in diameter and 485 feet deep. Capacity 86,400 gallons per day. Not filtered. Total capacity of plant, 431,400 gallons per day. Average consumption, 75,000 gallons per day. Service metered. 75 per cent. of buildings using city water supply.
Sewerage system: 75 per cent. of city sewered. 15 per cent. water closets. Sewerage empties into Black River Swamp. No garbage disposal plant.

June 1, 1920	8.00	0.02	0.02	0.005	0.10	212.00	Negative
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Water Supply of Marion, S. C.

Carolina Gas and Electric Co. General Superintendent, P. A. Tillery. Raleigh, N. C. In charge of collection of samples, D. Thomlinson, local superintendent. Chairman of local Board of Health, Dr. E. M. Dibble.
Source: Wells, diameter, 8 and 10 inches, depth 100 and 150 feet, in city. Capacity, 150,000 gallons per day; not filtered. Capacity of plant, 150,000 gallons per day. Average consumption, 75,000 gallons per day. Consumption per capita, 15 gallons per day. Service metered. About 50 per cent. of buildings using city water supply.
Sewerage system: Entire city sewered; 40 per cent. of buildings connected with sewer and have water closets. Septic tank. Sewerage empties into Catfish Creek. Garbage dumped on "Dump Grounds," outside city and set on fire. No garbage disposal plant.

March 5, 1920	5.00	0.02	0.03	0.003	0.20	217.00	Negative
June 8, 1920	8.00	0.02	0.03	0.000	0.10	196.00	Negative
September 15, 1920	8.00	0.01	0.02	0.000	0.10	246.00	Negative
December 8, 1920	8.00	0.03	0.02	0.001	0.00	153.00	Negative

RESULTS IN PARTS PER MILLION.—(Continued.)

Water Supply of McColl, S. C.

City of McColl Water Works. Superintendent, Clarence Powell. In charge of collection of samples, Clarence Powell. Chairman of local Board of Health, J. C. Moore, M. D.

Source: Three wells 100 feet deep, 6 inches in diameter, pumped, within city. Capacity, 250,000 gallons per day of 24 hours. Not filtered. Average consumption, about 100,000 gallons. Service metered. 90 per cent. of buildings using city water supply.

Sewerage system: Entire city sewered. 85 per cent. of buildings have water closets. Sewer empties into Panter Creek. Sewerage disposal plant. No garbage disposal plant. Garbage hauled outside city limits.

Sample Drawn.	Chlorine.	Free Ammonia.	Albuminoid Ammonia.	Nitrogen as Nitrates.	Nitrogen as Nitrites.	Total Solids.	Bacterial Indications of Contamination.	Chemical Indications of Contamination.
March 16, 1920	6.00	0.01	0.01	0.000	0.30	33.00	Negative	Negative
June 7, 1920	6.00	0.04	0.06	0.000	0.10	38.00	Negative	Negative
September 18, 1920	8.00	0.05	0.04	0.003	0.10	41.00	Negative	Negative
December 6, 1920	8.00	0.04	0.03	0.001	0.30	49.00	Negative	Negative

Water Supply of Mullins, S. C.

Board of Public Works. Owned by town of Mullins. Superintendent, G. M. Brown. In charge of collection of samples, G. M. Brown. Chairman local Board of Health, Dr. J. W. Hollis.

Source: Deep well, 10 inches in diameter, 350 feet deep, in city. Capacity, 125,000 gallons per day. Capacity of plant, 125,000 gallons per day. Average consumption 75,000 gallons per day. Service metered, 99 per cent. buildings using city water supply. 20 per cent. septic tanks, 4-10 of 1 per cent.

Sewerage system: 40 per cent. city sewered 30 per cent. of buildings are connected with sewer and have water closets. Sewerage empties into open stream, White Oak. No garbage disposal plant. Garbage dumped in city.

April 9, 1920	10.00	0.02	0.01	0.00	0.30	235.00	Negative	Negative
June 24, 1920	10.00	0.03	0.01	0.00	0.00	200.00	Negative	Negative
November 27, 1920	11.00	0.01	0.02	0.002	0.30	138.00	Negative	Negative

Water Supply of Newberry, S. C.

In charge of Commission of Public Works. Owned by city. Superintendent, samples, Dr. R. L. Mayes. Chairman of local Board of Health, Dr. R. L. Mayes. Source: Wells, 2 inches in diameter, 300 feet deep, 8 inches in diameter, 300 feet deep, 10 inches in diameter, 300.5 feet deep. Well ten inches in diameter, and 350 feet deep now being drilled, pumped by air, in city limits. Capacity, 216,000 gallons per day; not filtered. Average consumption 200,000 gallons per day. Consumption per capita 23 gallons per day. Service metered. 95 per cent. of buildings using city water supply. Sewerage system: 75 per cent. connected with sewer. No connection in tenement houses in cotton mill district. Using a "Pot Dry Closets." Sewerage disposal plant. Septic tank and filter. Sewerage empties into Scott's Creek. Incinerator is installed for disposal of garbage.

March 8, 1920	33.00	0.01	0.02	0.001	0.70	374.00	Negative
June 3, 1920	33.00	0.02	0.04	0.000	0.20	318.00	Negative
September 13, 1920	31.00	0.01	0.02	0.000	0.50	361.00	Negative
December 8, 1920	32.00	0.01	0.01	0.000	0.50	320.00	Negative

Water Supply of North Augusta, S. C.

North Augusta Works. Owned by town. James U. Jackson, receiver. In charge of collection of samples, W. E. Mealing. Chairman of local board of Health, W. E. Mealing.

Source: Springs forming lake in city, not filtered. Treatment, 1.50 pounds hypochlorite of lime to 1,500,000 gallons. Capacity 400,000 gallons per day. Capacity of plant, 330,000 gallons per day. Average consumption, 250,000 gallons per day. Service metered.

Sewerage system: 80 per cent. of city sewer. Sewerage empties into Savannah River. No garbage disposal plant. Garbage dumped outside of town.

April 5, 1920	9.00	0.01	0.05	0.00	0.40	66.00	Positive
June 25, 1920	10.00	0.02	0.02	0.00	0.20	51.00	Negative
September 29, 1920	10.00	0.02	0.02	0.00	0.00	70.00	Negative

Water Supply of Orangeburg, S. C.

Orangeburg Water & Light Plant. Owned by city. Superintendent, J. F. Pearson. In charge of collection of samples, J. F. Pearson. Chairman of local Board of Health, V. W. Brabham.

Source: Three wells, 8 inches in diameter, 200 feet deep pumped and not filtered. Capacity of plant, 70,000 gallons per day. Average consumption 300,000 gallons per day. Consumption per capita, 38 gallons per day. Service 75 per cent. metered.

Sewerage system: 60 per cent. buildings connected with sewerage system and have water closets. Sewerage empties into Edisto River. Garbage dumped at incinerator and burned.

March 15, 1920	9.00	0.01	0.02	0.00	0.10	225.00	Negative
June 9, 1920	10.00	0.01	0.02	0.00	0.10	183.00	Negative
September 17, 1920	10.00	0.02	0.01	0.00	0.00	169.00	Negative
December 11, 1920	8.00	0.01	0.01	0.00	0.00	201.00	Negative

RESULTS IN PARTS PER MILLION.—(Continued.)

Water Supply of Rock Hill, S. C.

Water and Light Department, City of Rock Hill. Manager, E. R. Treverton. In charge of collection of samples, S. T. Frew. Chairman of local Board of Health, Dr. J. R. Miller.

Source: Catawba River, 6 miles from city. Filtered by mechanical filter. Treatment, 3-4 grain of alum per gallon, 1-2 grain lime per gallon, 0.05 grain hypochlorite of lime per gallon. Capacity of plant 1,000,000 gallons per day. Average consumption, 450,000 gallons per day. Consumption per capita, 50 gallons per day. Service metered, 70 per cent. of buildings using city water supply.

Sewerage system: 25 per cent. of buildings connected with sewerage system and have water closets. Sewerage empties in small streams after Imhoff treatment, thence into Catawba River. Sewerage disposal plant. Garbage dumped on city farm.

Sample Drawn.	Chlorine.	Free Ammonia.	Albuminoid Am- monia.	Nitrogen as Ni- trates.	Nitrogen as Ni- trates.	Total Solids.	Bacterial Indica- tions of Con- tamination.	Chemical Indica- tions of Contam- ination.
March 15, 1920	5.00	0.02	0.03	0.000	0.40	112.00	Negative	Negative
June 17, 1920	5.00	0.02	0.02	0.000	0.00	65.00	Negative	Negative
September 23, 1920	6.00	0.01	0.02	0.000	0.10	36.00	Negative	Negative
December 3, 1920	6.00	0.01	0.03	0.000	0.00	53.00	Negative	Negative

Water Supply of Spartanburg, S. C.

Spartanburg Water Works. Owned by city. Operated by specially chartered Board of Water Commissioners. Superintendent, R. B. Simms. Dr. C. B. Waller in charge of collection of samples. Chairman of local Board of Health, Dr. H. R. Black.

Source: Chiquapi Creek, that flows into reservoir, Shoaley and Lawson's Fork Creeks, one and one-half miles from city limits. Capacity, 18,000,000 gallons per day. City consumption, 2,500,000 gallons per day. Treatment, 1-2 to 4 grains alum owing to turbidity with six to eight hours coagulant run thence through mechanical filter to clear well and treated with chlorine. Consumption per capita, 100 gallons per day. Service 75 per cent. of city buildings using water supply.

Sewerage system: 55 per cent. of buildings connected with sewer and have water closets. Sewerage empties into Law-son's Fork Creek and Fair Forest Creek, 1-8 miles from city limits. Garbage disposal plant and garbage burned, some garbage dumped on outskirts of city.

April 16, 1920	3.00	0.03	0.03	0.001	0.20	21.00	Negative	Negative
June 8, 1920	5.00	0.02	0.03	0.000	0.10	35.00	Negative	Negative
September 18, 1920	4.00	0.04	0.03	0.000	0.20	33.00	Negative	Negative
December 9, 1920	5.00	0.03	0.02	0.000	0.10	25.00	Negative	Negative

Water Supply of Sumter, S. C.

City Water Works. Owned by city. Superintendent, W. W. McKagan. In charge of collection of samples, W. W. McKagan. Chairman of local Board of Health, S. O. Quinn.
Source: 15 wells, 6 inches in diameter, 50 to 430 feet deep, pumped. Pumps in pit 9 feet below surface; 1 mlie from city. Capacity, 1,800,000 gallons per day; not filtered. Capacity of plant electric, 720,000 gallons per day. Service 95 per cent. metered; 75 per cent. of buildings connected with sewer and have water closets. Sewerage empties into Turkey Creek and Green Swamp. Septic tanks. No garbage disposal plant. Garbage dumped in lot outside of city limits.

March 20, 1920	5.00	0.02	0.01	0.00	0.60	55.00	Negative
June 17, 1920	10.00	0.09	0.09	0.00	0.30	73.00	Negative
October 27, 1920	10.00	0.02	0.02	0.00	0.50	47.00	Negative
December 13, 1920	10.00	0.02	0.02	0.00	0.30	35.00	Negative

Water Supply of Timmonsville, S. C.

Board of Public Works. Superintendent, B. Carter. In charge of collection of samples, B. Carter. Chairman of local Board of Health, J. E. Patterson.
Source: Well, 8 inches in diameter, 326 feet deep, on outer edge of town. Capacity, 300,000 gallons per day. Average consumption, 20,000 gallons per day. Consumption per capita, 20 gallons per day. Service metered. 80 per cent. of buildings using city water supply.
Sewerage system: 60 per cent. of buildings connected with sewer and have water closets. Septic tank. Sewerage empties in Sparrow Swamp. No garbage disposal plant. Garbage burned and dumped into swamp.

March 15, 1920	5.00	0.02	0.01	0.00	0.00	154.00	Negative
June 18, 1920	6.00	0.03	0.05	0.00	0.00	175.00	Negative
September 18, 1920	6.00	0.03	0.02	0.00	0.00	37.00	Negative
December 3, 1920	9.00	0.03	0.01	0.00	0.00	72.00	Negative

Water Supply of Union, S. C.

Municipal Electric Light and Water Works. Superintendent, R. A. Easterling. Chairman of local Board of Health, S. G. Sarraitt. In charge of collection of samples, R. A. Easterling.
Source: Creek, 2 miles from city. Capacity, 15,000,000 gallons per day. Filtered by mechanical filter. Treatment, alum. Capacity of plant, 500,000 gallons per day. Average consumption 400,000 gallons per day. Consumption per capita, 35 gallons per day. Service metered. 80 per cent. of buildings using city water supply.
Sewerage system: 75 per cent. of city sewered and have water closets. Sewerage empties into Buffalo Creek. No garbage disposal plant. Garbage dumped outside city limits.

March 15, 1920	4.00	0.04	0.04	0.00	0.20	63.00	Negative
July 1, 1920	6.00	0.04	0.05	0.00	0.00	104.00	Negative
September 18, 1920	6.00	0.03	0.04	0.00	0.00	71.00	Negative
December 10, 1920	9.00	0.03	0.03	0.00	0.00	72.00	Negative

RESULTS IN PARTS PER MILLION.—(Continued.)

Water Supply of Winnsboro, S. C.

Board of Public Works. Owned by town. Superintendent, T. R. Ellison. In charge of collection of samples, T. R. Ellison, Chairman of local Board of Health, Dr. J. E. Douglas.
 Source: Creek 2 miles from city, filtered. Capacity, 1,000,000 gallons per day. Treatment, alum. Average consumption 75,000 gallons per day. Consumption per capita, 40 gallons per day. Service not metered. 80 per cent. of buildings using city water supply.
 Sewerage system: 85 per cent. of city sewer, 75 per cent. of buildings connected with sewer. Sewerage empties into Cathcart's Branch, 3-4 mile from city. Septic tank. No garbage disposal plant. Garbage dumped in low waste places.

Sample Drawn.	Chlorine.	Free Ammonia.	Albuminoid Am- monia.	Nitrogen as Ni- trates.	Nitrogen as Ni- trates.	Total Solids.	Bacterial Indica- tions of Con- tamination.	Chemical Indica- tions of Contam- ination.
March 15, 1920	8.00	0.01	0.02	0.001	0.20	92.00	Negative	Negative
June 14, 1920	10.00	0.02	0.02	0.000	0.00	108.00	Negative	Negative
September 20, 1920	9.00	0.02	0.03	0.000	0.10	87.00	Negative	Negative
December 8, 1920	9.00	0.01	0.03	0.000	0.10	75.00	Negative	Negative

Water Supply of Woodruff, S. C.

Board of Public Works. Owned by town. Superintendent, T. W. Cox. In charge of collection of samples, T. W. Cox.
 Chairman local Board of Health, T. W. Cox.
 Source: Well one-half mile from city, depth 400 feet. Capacity, 105,000 gallons per day. Service metered. 40 per cent. buildings using city water supply.
 Sewerage system: 75 per cent. of city sewer, 40 per cent. of buildings connected with sewer and have water closets. Two septic tanks. Sewerage empties into branch and creek. No garbage disposal plant. Garbage dumped in tank.

March 8, 1920	5.00	0.01	0.03	0.00	0.10	267.00	Negative	Negative
June 9, 1920	5.00	0.02	0.03	0.00	0.10	208.00	Negative	Negative
September 24, 1920	7.00	0.01	0.02	0.00	0.10	214.00	Negative	Negative
December 6, 1920	8.00	0.01	0.02	0.00	0.10	218.00	Negative	Negative

Water Supply of York, S. C.

Yorkville Water Plant. Owned by City. Superintendent, J. O. Wray. In charge of collection of samples, J. O. Wray. Chairman of local Board of Health, Dr. M. T. Walker.

Source: Branch 3-4 mile from city. Capacity 800,000 gallons per day. Capacity of plant, 500,000 gallons per day. Average consumption, 200,000 gallons per day. Consumption per capita, 35 gallons per day. Service metered. 70 per cent. of buildings connected with city water supply.

Sewerage system: 50 per cent. of buildings connected with sewerage and have water closets. Sewerage empties into Fishing Creek on east and Turkey Creek on west. No garbage disposal plant. Garbage dumped on wornout land outside city limits.

	7.00	0.01	0.02	0.00	0.20	61.00	Negative	Negative
	5.00	0.03	0.08	0.00	0.10	105.00	Positive	Positive
May 4, 1920								
June 18, 1920								

FINANCIAL STATEMENT

The following is a correct statement of the expenditures of the State Board of Health for the fiscal year 1920. All claims against the Board are itemized and rendered in duplicate, the original being attached to warrant of Comptroller General and forwarded to his office for payment—the duplicate being filed in this office.

SUPERVISION AND CONTROL OF HEALTH.

A. Personal Service.		
A-3. Fees		\$1,130 00
B. Contract and Open Order Service.		
B-1. Transportation	624 05	
B-4. Printing and Advertising	42 90	666 95
Total Contract and Open Order Service	\$ 666 95	
C. Supplies.		
C-4. Office Supplies	\$ 93 00	
C-15. Other Supplies	35 00	
Total Supplies		128 00
D. Fixed Charges and Contributions.		
D-9. Contributions	\$ 71 00	71 00
Total Supervision and Control of Health		\$2,000 00
Appropriation	\$2,000 00	
Expenditures	1,995 95	
Balance	\$ 4 05	

SUPERINTENDENCE AND ACCOUNTS.

A. Personal Service.		
A-1. Salaries	\$ 9,400 00	
A-3. Fees	200 00	
Total Personal Service		\$ 9,600 00
B. Contract and Open Order Service.		
B-1. Transportation	\$ 1,997 60	
B-2. Communication	331 61	
B-3. Repairs	6 40	
Total Contract and Open Order Service		2,335 61
C. Supplies.		
C-4. Office Supplies	\$ 871 95	
C-6. Medical Supplies	16,919 40	
C-7. Refrigerating Supplies	110 40	
C-15. Other Supplies	20 80	
Total Supplies		\$17,922 55
D. Fixed Charges and Contributions.		
D-3. Rents	\$ 568 00	
D-5. Insurance	7 00	
Total Fixed Charges and Contributions		575 00
G. Equipment.		
G-1. Office Equipment	\$ 159 71	
Total Equipment		159 71
Total Superintendence and Accounts		
Appropriation	\$30,668 00	
Expenditures	30,592 87	
Balance	\$ 75 13	

CONTROL OF EPIDEMIC DISEASES.

A. Personal Service.		
A-2. Wages	\$ 81 00	
A-3. Fees.	3,104 35	
Total Personal Service		\$ 3,185 35
B. Contract and Open Order Service.		
B-1. Transportation	\$ 2,066 08	
B-2. Communication	404 46	
B-4. Printing	244 75	
Total Contract and Open Order Service		2,715 29
C. Supplies.		
C-2. Fuel Supplies	\$ 57 68	
C-3. Feed Supplies	55 17	
C-4. Office Supplies	805 04	
C-6. Medical Supplies	1,042 88	
Total Supplies		1,960 77
D. Fixed Charges and Contributions.		
D-3. Rents	\$ 280 00	
D-4. Interest on Debt	29 17	
D-5. Insurance	8 30	
Total Fixed Charges and Contributions		317 47
G. Equipment.		
Office Equipment	\$ 231 23	
Total Equipment		231 23
Total Control Epidemic Diseases		\$ 8,410 11
Appropriation	\$10,000 00	
Expenditures	8,410 11	
Balance	\$ 1,589 89	
Outstanding Bills (?)		

MALARIAL COOPERATIVE WORK.

A. Personal Service.		
A-1. Salaries	\$ 378 24	
A-2. Wages	6,711 74	
Total Personal Service		\$ 7,089 98
B. Contract and Open Order Service.		
B-1. Transportation	\$ 50 53	
B-3. Repairs	9 15	
Total Contract and Open Order Service		\$ 59 68
C. Supplies.		
C-4. Office Supplies	\$ 35 60	
C-15. Other Supplies	1,651 24	
Total Supplies		1,686 84
D. Fixed Charges and Contributions.		
D-5. Insurance	\$ 63 50	
G. Equipment.		
G-4. Motor Vehicles	\$ 1,100 00	
Grand Total Malarial Cooperative Work		\$10,000 00
Appropriation	\$10,000 00	
Expenditures	10,000 00	
Balance	0	

BUREAU OF RURAL SANITATION.

A. Personal Service.		
A-1. Salaries	\$16,993 52	
Total Personal Service		\$16,993 52

B. Contract and Open Order Service.		
B-1. Transportation	5,338 77	
B-2. Communication	99 15	
B-3. Repairs	23 60	
B-4. Printing	275 23	
Total Contract and Open Order Service		5,736 75
C. Supplies.		
C-4. Office Supplies	\$ 892 70	
C-6. Medical Supplies	130 53	
C-8. Educational Supplies	120 77	
Total Supplies		1,144 00
D. Fixed Charges and Contributions.		
D-3. Rents	180 00	
D-5. Insurance	84 00	
Total Fixed Charges and Contributions		264 00
G. Equipment.		
G-1. Office Equipment	1,041 17	
G-4. Motor Vehicles and Equipment	855 00	
G-7. Educational and Recreational	963 85	
Total Equipment		2,860 02
Total Bureau of Rural Sanitation		\$26,998 29
Appropriation	\$27,000 00	
Expenditures	26,998 29	
Balance	\$1 71	

FINANCIAL STATEMENT OF THE DIVISION OF VENEREAL DISEASE
CONTROL FOR THE YEAR 1920.

A. Personal Service.		
A-1. Salaries		\$44,010 43
B. Contract and Open Order Service.		
B-1. Transportation	\$ 7 50	
B-2. Communication	198 22	
B-3. Repairs	17 00	
B-4. Printing	282 55	
		505 27
C. Supplies.		
C-4. Office	\$ 881 61	
C-5. Laundry	88 85	
C-6. Medical and Surgical	15,126 76	
C-7. Refrigeration	27 10	
C-9. Motor Vehicle	196 50	
C-12. Heat, Light and Power	22 85	
C-15. Other Supplies	37 20	
		16,380 87
D. Fixed Charges and Contributions.		
D-3. Rents	\$ 940 00	
D-5. Insurance	50 40	
		990 40
Capital Outlay: G-Equipment.		
G-2. Medical and Surgical	\$ 115 21	
G-3. Household	189 00	
G-4. Motor Vehicle	850 00	
G-7. Educational	47 00	
		1,201 21
Total Expenses		\$63,088 18
INSERTS FOR STATE BOARD OF HEALTH—91478.		
INSERTS FOR STATE BOARD OF HEALTH—91478.		

CHEMICAL LABORATORY.

A. Personal Service.		
A-1. Salaries	\$ 8,100 00	
A-2. Wages	387 00	
Total Personal Service.....		\$ 8,487 00

B. Contract and Open Order Service.		
B-1. Transportation	\$ 21 38	
B-2. Communication	74 38	
B-3. Repairs	38 72	
Total Contract and Open Order Service		134 48
C. Supplies.		
C-2. Fuel Supplies	\$ 198 21	
C-3. Feed Supplies	209 05	
C-4. Office Supplies	765 82	
C-6. Medical Supplies	551 80	
C-15. Other Supplies	18 95	
Total Supplies		\$1,743 83
G. Equipment.		
G-2. Medical Equipment	\$ 382 25	
Total Chemical Laboratory		\$10,747 56
Total Appropriation	\$10,750 00	
Expenditures	10,747 56	
Balance	\$2.44	

BUREAU OF CHILD HYGIENE.

A.-Personal Service.		
A-1. Salaries		\$7,920 00
B.-Contract and Open Order Service.		
B-1. Transportation	\$2,100 00	
B-2. Communication	263 25	
B-3. Repairs	7 50	
Total Contract and Open Order Service		2,370 75
C.-Supplies.		
C-4. Office Supplies		1,882 85
D.-Fixed Charges and Contributions.		
D-3. Rents		150 00
G.-Equipment.		
G-1. Office Equipment	100 00	
G-2. Medical Equipment	16 40	
Total Bureau of Child Hygiene		116 40
Total Bureau of Child Hygiene		\$12,440 00
Appropriation	\$12,440 00	
Expenditures	12,440 00	
Balance	0	

PREPARATION OF VITAL STATISTICS.

A. Personal Service.		
A-1. Salaries	\$4,440 00	\$4,440 00
B. Contract and Open Order Service.		
B-1. Transportation	\$ 34 00	
B-2. Communication	66 00	
Total Contract and Open Order Service		100 00
C. Supplies.		
C-4. Office Supplies	\$1,260 00	
Total Supplies		1,260 00
G. Equipment.		
G-1. Office Equipment	\$ 200 00	
Total Supplies		200 00
Total Preparation of Vital Statistics.....		\$6,000 00
Appropriation	\$6,000 00	
Expenditures	6,000 00	
Balance	0	



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HOTEL INSPECTION FUND.

A. Personal Service.		
A-1. Salaries	\$2,400	00
B. Contract and Open Order Service.		
B-1. Transportation	1,643	31
C. Supplies.		
C-4. Office Supplies	263	85
C-9. Motor Vehicle Supplies	94	20
Total Supplies	\$ 358	05
D. Fixed Charges and Contributions.		
D-5. Insurance	\$ 104	97
F. Materials.		
F-4. Other Materials	252	79
G. Equipment.		
G-4. Motor Vehicles and Equipment	1,165	57
Grand Total Hotel Inspection Fund.....		\$5,924 69
Appropriation	\$6,000	00
Expenditures	5,924	69
Balance	\$75	31
Outstanding Bills (?)		

SOUTH CAROLINA AND PALMETTO SANATORIUMS.

A. Personal Service.		
A-1. Salaries	\$12,661	31
Total Personal Service		\$12,661 31
B. Contract and Open Order Service.		
B-1. Transportation	1,324	80
B-2. Communication	262	45
B-3. Repairs	7	50
Total Contract and Open Order Service		1,594 75
C. Supplies.		
C-1. Food Supplies	\$14,639	46
C-2. Fuel Supplies	2,364	14
C-3. Feed Supplies	671	32
C-4. Office Supplies	1,041	31
C-5. Disinfecting Supplies	61	50
C-6. Medical and Surgical Supplies	1,474	42
C-7. Refrigerating Supplies	440	00
C-14. Clothing and Dry Goods	2,005	63
C-15. Other Supplies	439	92
Total Supplies		23,137 70
D. Fixed Charges and Contributions.		
D-3. Rents	\$ 150	00
D-5. Insurance	2,009	95
Total Fixed Charges and Contributions		2,159 95
F. Materials.		
F-3. Building Materials	\$ 3,036	69
Total Materials		3,036 69
G. Equipment.		
G-1. Office Equipment	\$ 92	25
G-3. Household Equipment	458	06
Total Equipment		550 31
H. Lands and Structures.		
H-3. Buildings	\$16,295	00
Total Lands and Structures		16,295 00
Total South Carolina and Palmetto San...		\$59,435 71
Appropriation	\$64,955	00
Expenditures	59,435	71
Balance	\$5,519	29
Outstanding Bills(?)		